Rush-Presbyterian-St. Luke's Medical Center

The Magazine

Treating Kidney Disease:
Fighting a Mysterious Enemy

WINTER 1978

The Magazine

of Rush-Presbyterian-St. Luke's Medical Center
volume 2, number 1, winter 1978

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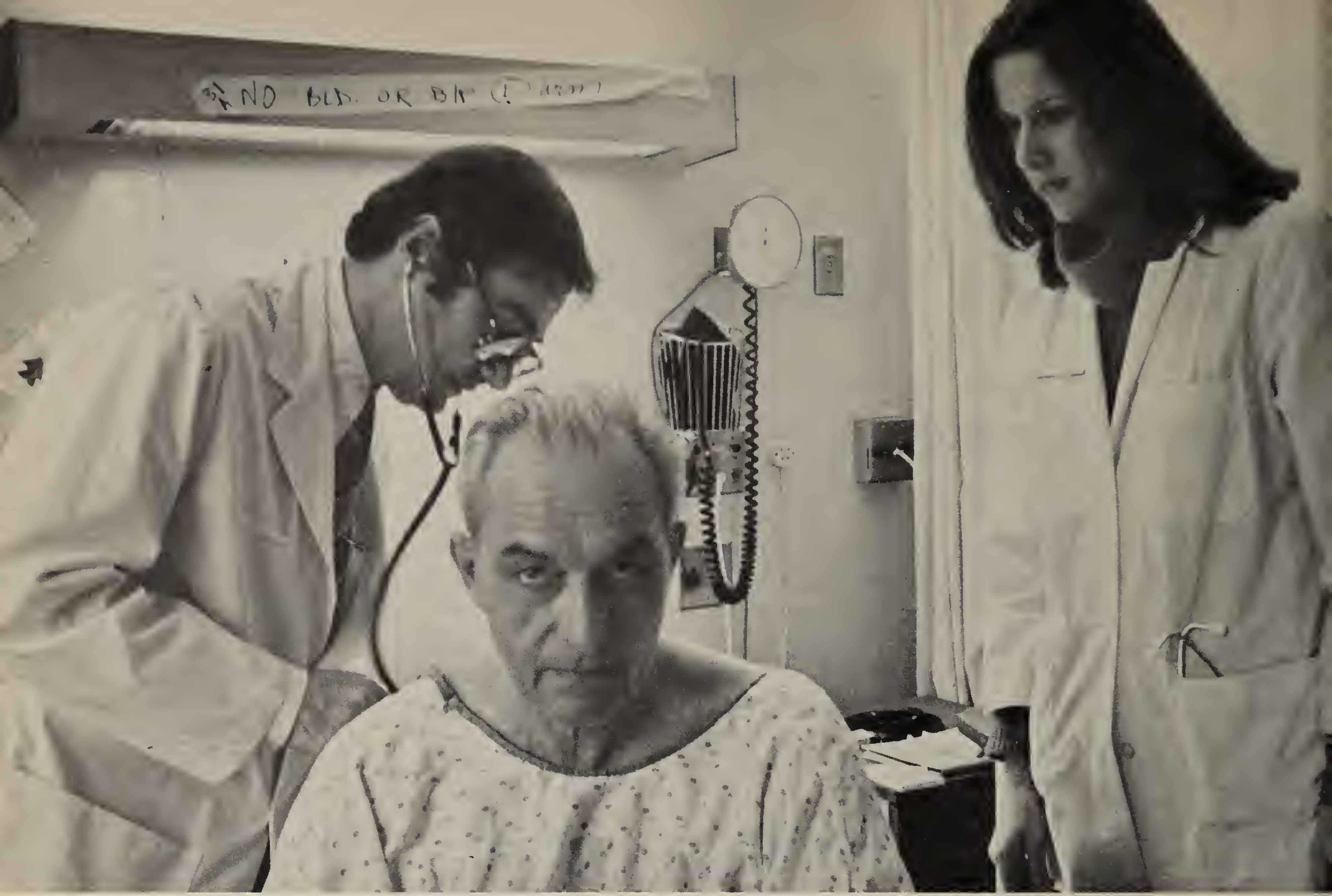

NO BLD. OR BP (L) ARM

Treating Kidney Disease: Fighting a Mysterious Enemy

By Helen Frank Bensimon

At first they usually can't believe it. They don't feel sick. A little tired and sluggish perhaps, but that's all.

Could there have been some mistake? Would some additional tests clear things up? How can someone who is basically feeling well be critically, incurably ill? But the diagnosis doesn't change.

End-stage renal disease.

Their kidneys are failing, barely functioning.

From now on, their lives will never be the same.

The victims are usually young—in their 20s, 30s or 40s. Although their kidneys have been deteriorating for years, they have experienced no symptoms. In many cases abnormalities might have been detected at an earlier stage by urine or blood tests, and medical intervention could have slowed down the inexorable destruction. But most patients go undiagnosed until it is too late because they have no symptoms and therefore do not seek medical attention. Only when normal kidney function is gone, and they begin to experience fatigue, or weakness, or low blood count, or high blood pressure, do they see a doctor.

More than 50,000 Americans have end-stage renal failure, and close to 50,000 will be diagnosed this year. End-stage renal failure is defined as chronic kidney failure which has progressed to a point where only a thrice-weekly mechanical cleansing of the blood by hemodialysis (artificial kidney) machine or a successful transplant, can keep the patient alive.

End-stage renal failure is not only a debilitating, life-threatening condition, it is also an expensive one.

In 1976, more than $600 million was spent in the United States for dialysis treatment and transplantation. In 1978, this is expected to jump to $900 million, and by the end of the decade the cost could be as high as $2 billion.

Until 1973, only a privileged few could avail themselves of dialysis treatments. At a cost of $40,000 per patient per year, these treatments were limited to the very wealthy and to the few non-wealthy who could obtain a subsidy enabling them to use one of the few dialysis facilities that were available. All over the country, special committees had the painful task of deciding which kidney disease patients in their community should be sponsored for access to these facilities—who should live and who should die.

In 1973, the federal government stepped in and pledged that anyone who needed dialysis should have the right to this treatment. End-stage renal failure was designated as a catastrophic illness, with the full cost of treatments reimbursable through Medicare. In Illinois, the situation had begun to improve in the late 1960s, when a program of financial support for these patients was set up by the State Department of Health.

Once federal support was assured, scores of private dialysis centers sprang up around the country to serve the thousands of patients who needed treatment. Today, tertiary care institutions like Rush-Presbyterian-St. Luke's Medical Center offer dialysis only for newly diagnosed patients and for previously diagnosed patients suffering complications. When their condition is stabilized, and when they have undergone intensive education and counseling about the disease, they are referred to a private dialysis center near their own home, so that the process will be as convenient and non-disruptive as possible.

About 15 percent of Rush patients are dialyzed at home, a figure which holds true nationally. "These patients need a stable home environment, living accommodations which offer space for dialysis equipment, and a partner who can be properly trained to perform or assist the dialysis," according to Jimmy Roberts, M.D., Assistant Professor of Medicine. In the past, when financial assistance was scarce, some 60 percent of dialysis patients were on home dialysis because it cost about half of the cost outside. However, when government support became available, the entire situation changed. In a sense, unintentionally, the government program has worked against home dialysis.

"We used to train patients for home dialysis and arranged with a supplier to provide patients with software requirements," Dr. Roberts says.

"However, Medicare didn't want to pay institutions for the supplies they arranged for patients to get. Our patients at home have to bill Medicare directly for materials, and have to deal with the cash lag between their purchase and reimbursement. Also, the patient now has to do all the paperwork. For many, it's easier just to go to a dialysis center, even though it costs 50 percent less at home. With home dialysis there's not only the usual emotional and physical burden, but a time and financial burden as well," Dr. Roberts says.

However, for some people, particularly those who live far away from a dialysis center, or who work from home, this is still the best solution and they are willing to undergo some of the discomfort.

"A multidisciplinary educational and counseling effort is essential for all dialysis patients," says Jeremiah Eagen, M.D., Assistant Professor of Medicine, and one of four attending nephrologists (kidney specialists), who rotate as directors of the Medical Center's dialysis unit.

"These people have a chronic illness and require help in every area of their lives."

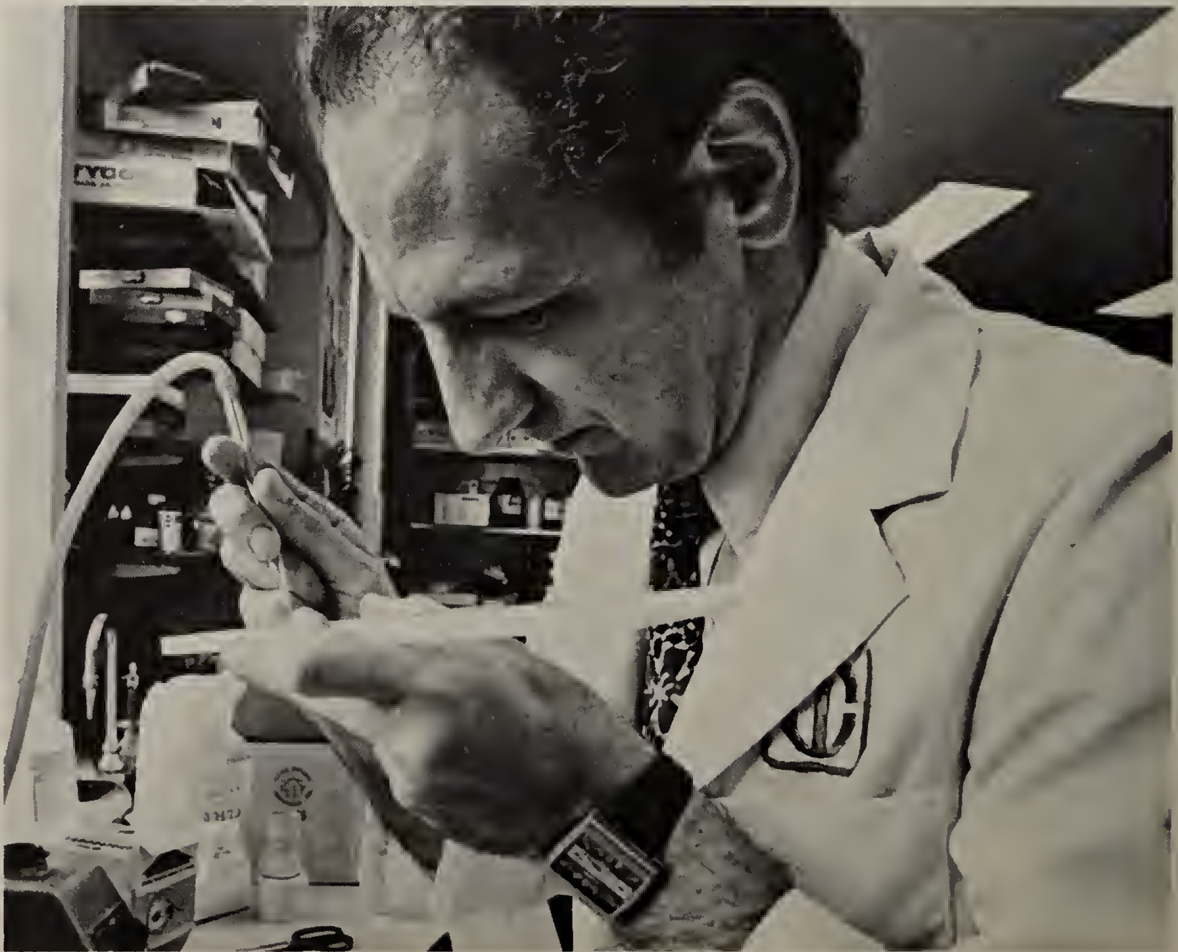
"It is definitely a catastrophic disease," says Carol Woulf, R.N., a nurse clinician in the Nephrology Section. Ms. Woulf works with all hospitalized kidney disease patients, and most transplant patients, and continues to see them for outpatient visits after they leave the hospital.

"Education of the patient and the family is the primary focus of what we all do. When patients first learn about their disease, most are shocked and angry and try to deny it. Then they become receptive to information about how they can actively participate in their treatment. However, some have a tendency not to accept what they need to do to stay well. The relationship can be very difficult at times because we expect so much of them.

"Once a patient is stabilized on hemodialysis, there is no guarantee that he will not encounter complications which may require hospitalization again. That's what makes it so difficult to deal with. I can't promise that complications won't recur."

What is chronic kidney disease, and how does it happen?

In normal, healthy people, two bean-shaped kidneys, each about four to five inches long and three



Edmund Lewis, M.D., Director,
Section of Nephrology

The most common kidney disease, which causes 60 to 70 percent of end-stage renal failure, is glomerulonephritis.

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to five inches wide and weighing about five ounces are located in the small of the back. As blood flows into the kidney from the arteries, it carries with it the body's waste products. The blood is divided up inside the kidneys, cleansed and purified by microscopic filters called glomeruli. Urine is made from the waste products and water, and goes from the kidney through the ureter, which carries it to the bladder to be excreted. The cleansed or purified blood then goes back to the body through the veins. During the process, the kidneys excrete urea or waste products from the protein in the blood, balance water and body chemicals such as sodium, potassium, phosphorus and calcium, and control blood pressure, bone development and the production of red blood cells. The kidneys also remove the potentially toxic products of the body's reaction to injury and infection.

No one knows what causes most kidney disease. However, a faulty immunological mechanism is believed to be the basis in many instances, and much of the landmark research now under way at Rush-Presbyterian-St. Luke's Medical Center is focused on clarifying this mechanism and on trying to learn what triggers it. Diabetes, high blood pressure and systemic lupus erythematosus (SLE), an inflammatory disease affecting many organs, may lead to kidney failure. However, the most common kidney disease, which causes 60 to 70 percent of end-stage renal failure, is glomerulonephritis. The disease develops in the following way:

When bacteria or viruses enter the body, the body fights them off by making antibodies, which attach to the foreign material called antigen, forming what are called antibody-antigen complexes. These complexes circulate through the blood and then are removed as the blood flows through the liver and the spleen.

"The importance of making antibody is twofold," explains Edmund Lewis, M.D., Professor of Medicine, the young nephrologist and immunologist who heads the Medical Center's Section of Nephrology.

"First, the antibody often neutralizes the toxic or infectious nature of the foreign antigen. Second, the antigen-antibody complex is more efficiently removed from the blood than is the antigen alone."

Sometimes, however, for reasons that are not clear, the liver and spleen fail to remove these immune complexes from the blood, and they continue to circulate, lodging in the blood vessels of the glomeruli of the kidneys. Once there, the immune complexes behave as foreign material and cause inflammation and blood vessel damage, leading eventually to destruction of the entire kidney filtering system. Waste products begin to build up in the blood; blood chemistries become unbalanced—potassium and phosphorus go up, calcium goes down. Water is retained and the ankles and feet swell up. Blood pressure goes up, hematocrit or red blood cell production goes down.

At a relatively early stage, a careful diet that compensates for the work no longer being done by the kidney, and medication, can slow down the disease process although it can't be stopped or

Melvin Schwartz, M.D., Assistant Professor of Pathology (Renal Pathologist)

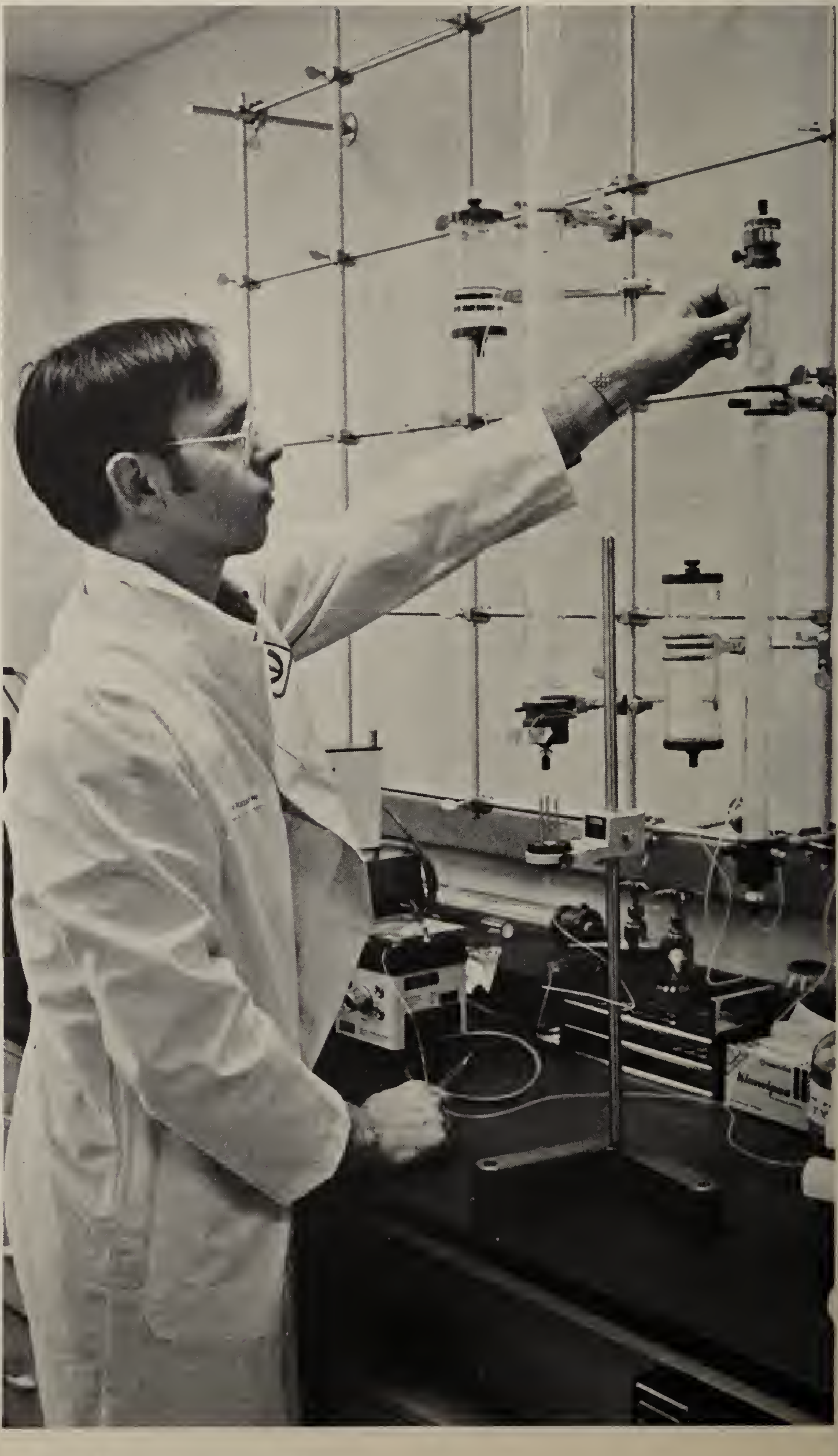
cured. Finally, when about 95 percent of kidney function is gone, hemodialysis or transplant are necessary to sustain life.

While dialysis and transplantation can sustain life, life expectancy is reduced and the quality of life may be seriously impaired. Dialysis patients have an average life expectancy of 10 years. The main killer is atherosclerosis—coronary artery disease—caused by hypertension, or by abnormal calcium metabolism resulting in calcium deposits in the arteries or by the excessive cardiovascular stress of the kidney disease. In terms of avoiding heart attacks, young patients don't seem to do much better than older ones.

Transplantation is no panacea either, although successfully transplanted patients have a life expectancy of around 15 years. Besides the usual risks of surgery and the immense psychological strain of the entire process and of never knowing when the new kidney might be rejected, the patient must spend the rest of his life on immunosuppressive medication. This medication prevents the rejection of the foreign kidney, but also prevents the rejection of other foreign organisms such as viruses and disease bacteria, leaving the patient seriously vulnerable to infection.

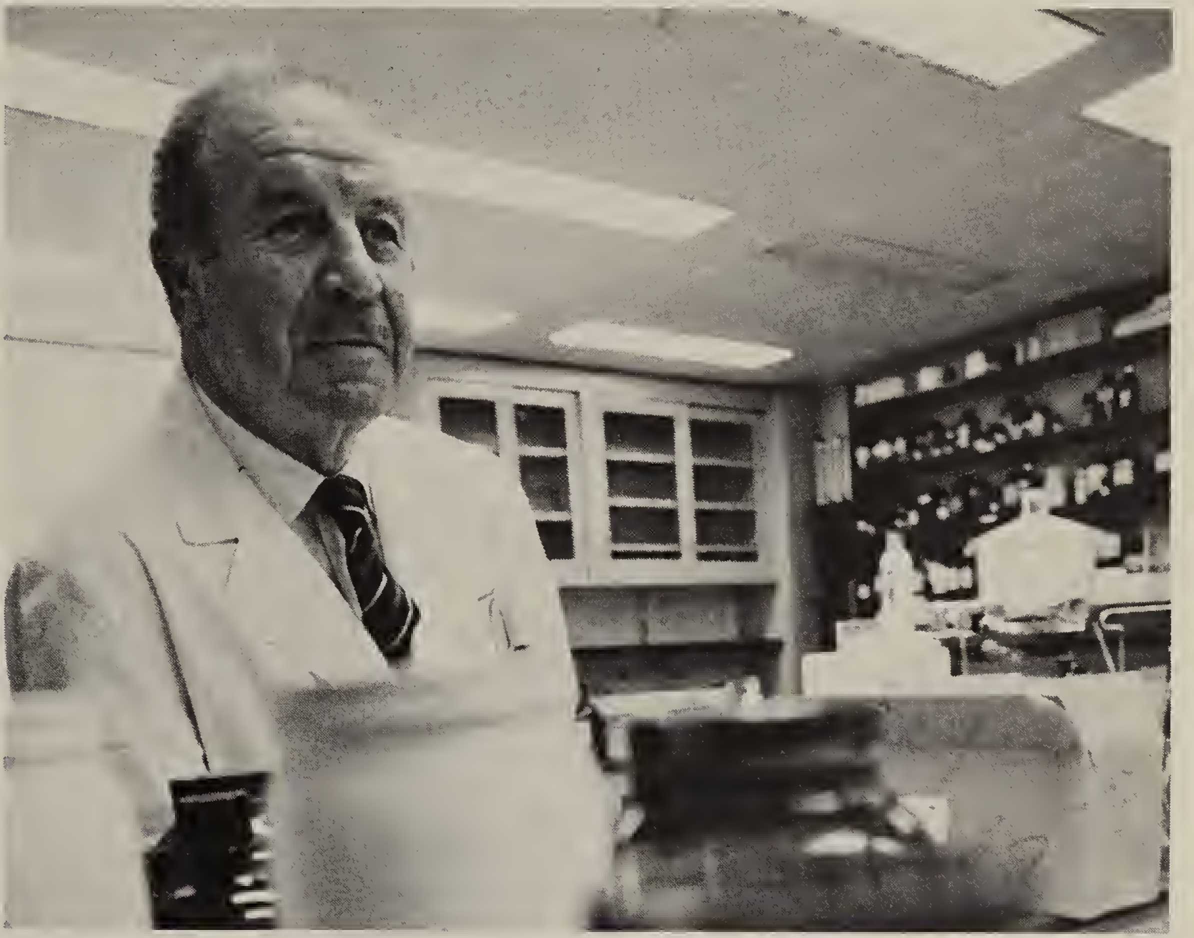
These patients also seem to be particularly vulnerable to certain types of cancers and other diseases.

Scientists at the Medical Center and at other centers around the world do not see dialysis or transplantation as solutions to the problem of renal failure. They are concentrating their efforts on pinpointing the cause of glomeru-



Michael Robinson, M.D., Fellow,
Nephrology and Rheumatology

While dialysis and transplantation can sustain life, life expectancy is reduced and the quality of life may be seriously impaired.



Robert M. Kark, M.D., Professor and Associate Chairman, Department of Medicine

lonephritis, in the hope of learning how to prevent it and how to cure it.

Historically, Rush-Presbyterian-St. Luke's Medical Center has been recognized as one of the world's great centers for treatment and research of kidney disease. One of the most important breakthroughs in the field was made in 1947 by Robert Kark, M.D., now Professor and Associate Chairman of the Department of Medicine who was then on the faculty of the University of Illinois Medical School. Dr. Kark discovered that the techniques he had been using in liver biopsies could be adapted successfully to the kidney. This discovery revolutionized the study of kidney disease because it made possible an understanding of how the kidney worked in living patients. Until that time, kidneys could be studied only at autopsy. Dr. Kark's breakthrough made possible more precise diagnoses and classification of kidney diseases.

By 1953, when Dr. Kark joined Presbyterian Hospital, kidney biopsies were being performed on a regular basis there and its renal unit had three nephrologists—Robert C. Muehrcke, M.D., now Associate Professor of Medicine at the Medical Center; Victor Pollak, M.D., now of the University of Cincinnati School of Medicine; and Conrad Pirani, M.D., now of Columbia University College of Physicians and Surgeons—as well as a staff of 50. There was also a unit for Chicago's first dialysis machines which had been established in 1946 by the late Howard Armstrong, M.D., then Chairman of the Department of Medicine at Presbyterian.

Dr. Kark's discovery paved the way for an explosion of research. There were studies applying ultra-microchemical techniques to renal biopsy; studies of renal function in cyanotic congenital heart disease and in toxemia of pregnancy; and the first controlled trials of several new types of therapy. Much of what is known today about the treatment of glomerulonephritis derives from this work. When techniques for kidney transplantation began to be developed, a transplant program was initiated. The institution's reputation made it a magnet for young physicians from throughout the world seeking the most advanced training in nephrology. Over the years, Presbyterian Hospital, Presbyterian-St. Luke's Hospital, and Rush-Presbyterian-St. Luke's Medical Center trained physicians from Poland, Germany, Italy, Belgium, Holland, Scotland, Denmark, Norway, England, Hong Kong, France, Thailand, India, Iran, Israel, Greece, Peru, Brazil, South Africa, Australia, New Zealand and Canada, who then established nephrology programs in their own countries. Some 80 of the leading nephrologists in the United States also have been trained to do renal biopsies at the Medical Center, including many of the leading renal physicians in Chicago.

Today, under the direction of Dr. Lewis, the Section of Nephrology continues to enjoy international prominence and is at the forefront of testing new ideas about the cause and treatment of end-stage renal disease. For example, it is the central laboratory for immunologic investigation for the International Study of Kidney Diseases in Children, an international collaborative project funded by the

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Hemodialysis: Weekly Trips to Maintain Life

They come three times a week, every week.

They are weighed, their blood is checked, the delicate balance of fluids and electrolytes tested. They are poked, probed and prodded. They get a chance to discuss their problems, both physical and emotional. Then their arms are hooked up to an artificial kidney machine which mechanically removes their blood, cleanses it of wastes and impurities, and then returns it. It takes six hours. Each time. For end-stage renal disease patients it is their only hope, because their own kidneys can't do the job.

That thousands of people manage to deal with this situation and somehow lead as close to a normal life as possible is a tribute to their own extraordinary courage, and to the unique dedication and sensitivity of the people who care for them.

At Rush-Presbyterian-St. Luke's Medical Center, an interdisciplinary team of 24 health professionals treats dialysis patients and helps them cope not only with their physical problems but also with the emotional and social stresses that their condition imposes. Everyone who works for the unit receives special training from the attending staff of the Medical Center's Section of Nephrology.

When a patient is diagnosed with end-stage renal failure—only dialysis or a kidney transplant can keep him alive—a group of physicians, nurses, and other staff evaluate all factors about the patient to determine the optimum therapeutic program. One of its most important objectives is to deal with each potential patient's individual problems before he begins dialysis treatment, so that the treatment process will be smoother.

All patients are interviewed by Ira Halper, M.D., Assistant Professor of Psychiatry, a specialist in the psychiatric problems caused by serious physical illness.

"We don't rule out many people for psychiatric reasons," says Dr. Halper.

"The most important purpose of the psychiatric interview is to get baseline data on the patient which will be helpful to the staff in treating that patient.

"We sometimes have people who had emotional problems before their renal failure and, through psychotherapy and psychotropic medication, we are able to achieve substantial improvement in their emotional condition even though they remain physically ill."

Each week, Dr. Halper meets with the dialysis unit staff to hear about any serious psychological or social problems which patients might be having, and to guide the staff in ways of dealing with these problems. He also sees the patients who are experiencing severe psychological difficulties.

"As a university medical center we attract the most medically complicated cases. I'm surprised at the very low incidence of serious psychiatric complications," Dr. Halper says.

"Most patients, after a period of adjustment, adapt well to dialysis.

Jeremiah Eagen, M.D., Acting Director, Hemodialysis Unit (right) and John Whiting, Technician (left) check the progress of a patient receiving hemodialysis.

I think that this is a reflection of the psychologically supportive and sensitive care of the nephrologists and the entire dialysis unit staff."

Patients receiving dialysis at Rush usually stay until their condition is considered to be stable, and they have been thoroughly educated about how to live with their disease. Then they are referred to a dialysis center or hospital near their home, so that the treatments are less inconvenient. Patients return to the Medical Center if there are complications or if they wish to see members of the staff for help with other problems.

Complications are not infrequent. According to Jeremiah Eagen, M.D., Assistant Professor of Nephrology and Acting Director of the Dialysis Unit, statistics show that dialysis patients are hospitalized an average of twice a year for an average of 11 days at a time due to complications.

Tying all the activities of the dialysis unit together is its 10-member nursing staff.

"The nursing role incorporates all aspects of the patient's care—medical, physical, social, psychological," says Terry Slowick, R.N., head nurse on the unit.

"Since starting dialysis is very traumatic, the initial treatments are very crucial to setting the tone," she says.

"It is important for the patients to establish trust in the nurses."

Each time the patients come in, the nursing staff checks whether they have gained or lost weight, how they are feeling, whether they have retained too much fluid. In this setting, changes in the patients' weight from day to day reflect how much water they have gained and lost. All this information affects just how the treatment will be administered. Patients are allowed to gain up to two pounds (i.e. one quart of water) between dialysis sessions. A gain of four to six pounds endangers the patient and requires different treatment criteria.

"We also have to deal with the long-term problems of the disease," says Ms. Slowick.

"The patient wants to know 'what worth does my life have now that I'm attached to a machine?' If they let the machine distract them from everything else in life, then they'll be very unhappy.

"What makes our job difficult is that sometimes we have to inflict discomfort or cause pain when we initiate treatment. We feel very bad when that happens. We feel sorry, even guilty, although these

Weigh-in before regular dialysis treatment things are unavoidable."

One of Ms. Slowick's most enjoyable tasks is arranging vacations for her patients. For years a major inconvenience of dialysis was the impediment to travel. Now, however, there are so many dialysis centers around the world, that travel is definitely possible if it is carefully planned. Ms. Slowick finds out where patients want to go, how long they want to stay, and makes an appropriate treatment plan. She has a listing of centers and contacts them to set up dialysis sessions, first obtaining such information as what kinds of staff the center has, what information the center needs about the patient, and whether there are strict hepatitis controls. Patients have taken vacations in Puerto Rico, Hawaii and around the country with all their complex medical needs met.

A major inconvenience to dialysis patients, besides the process itself, is the stringent dietary restrictions they must follow.

Sue Gentry, R.D., the Nephrology Section's nutritionist, helps them understand the changes that are necessary to compensate for the work no longer being done by the diseased kidneys.

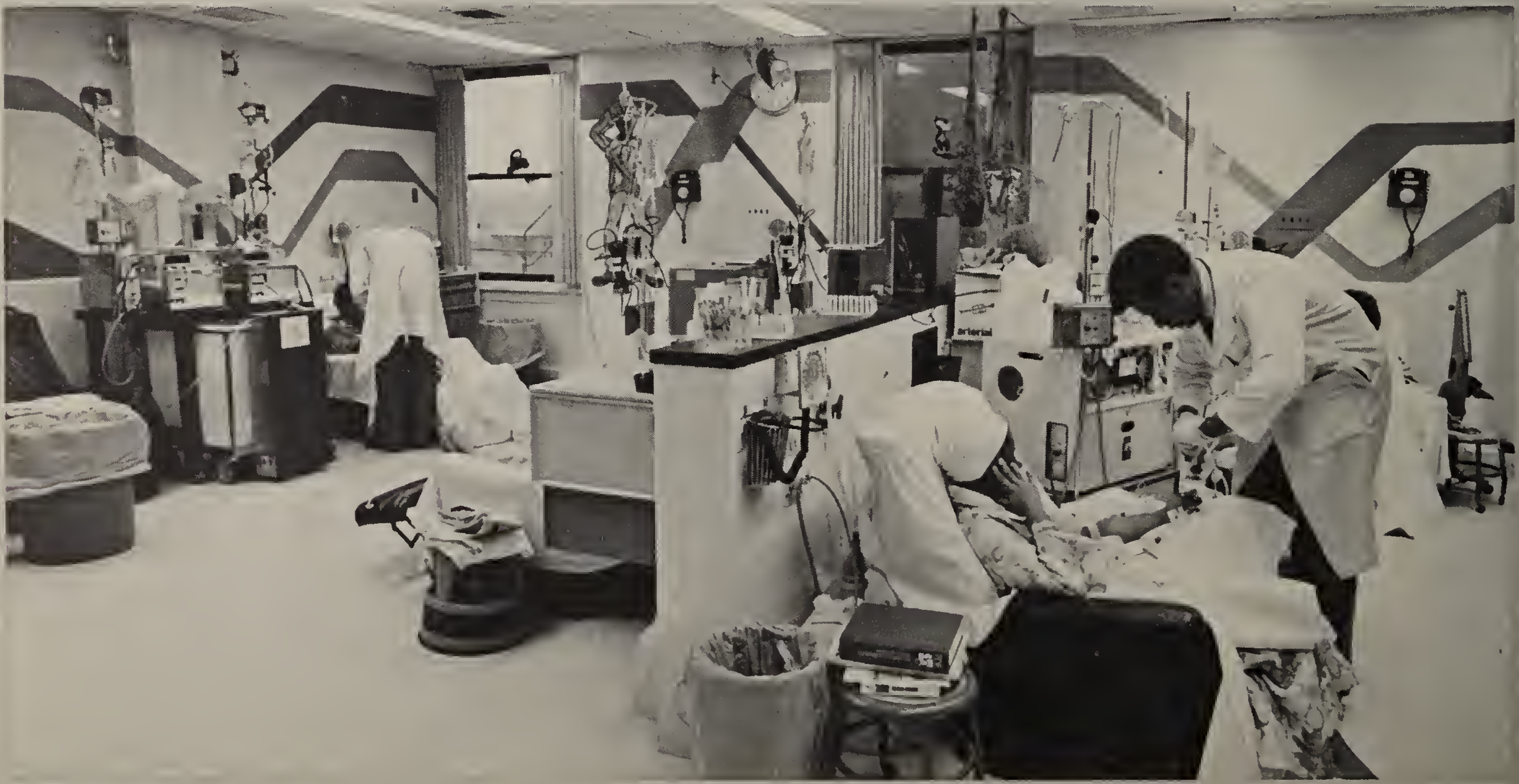
"It's a very difficult diet," she says, "so it requires a lot of time for me to give the patient the background."

She works with patients individually when they first develop renal disease, tailoring diets to conform to their individual eating habits and other nutritional problems. Patients learn how and why the diet is changed, which helps them understand why they must weigh their meat, measure other food and fluid intake. Ms. Gentry also teaches group classes. She constantly monitors physical signs, laboratory data and fluid weight gains so that the patients can get appropriate nutritional counseling to deal with even the slightest change in their situation.

The diet is controlled in many ways, determined by the individual's body weight and caloric intake, at a level which will prevent weight loss and malnutrition.

Protein intake contributes to the toxins which cause the "sick" feelings in renal disease and therefore must be restricted. Sodium and water intake must be carefully controlled. Salt, smoked and cured meats, salted snack foods and "convenience foods" with sodium preservative added must all be given up. Fluid weight gain between dialysis treatments must be kept to one pound per day.

Potassium buildup can trigger sudden cardiac arrest. For this



Dialysis Unit

reason, salt substitute, potassium chloride salt, cannot be used in place of table salt, and patients often have to give up their favorite fruits or vegetables, such as baked potato, spinach, dried beans and peas, melons, bananas or orange juice because they are high in potassium. There also are restrictions on the amount of phosphorus to prevent bone disease. The amount of milk, milk products, eggs and fish must be restricted.

"An area of nutritional concern which requires much more investigation is that of vitamin and mineral deficiencies caused by uremic toxins and dialysis," Ms. Gentry says. "Supplements of B-Complex and C vitamins are among the requirements needed to offset this.

"Usually the diet scares patients, because it is so difficult," says Ms. Gentry. "Some overreact and become completely compulsive, while others deny their illness and are non-compliant. With proper dietary management, we can control the patient's sick feeling until dialysis is started.

"We try to keep them in the best possible shape. That can backfire, because some patients begin to feel so well, they don't understand why they need dialysis.

"I try to stay at a level where I can empathize but still be objective," she says.

"That's a hard thing to achieve."

Many of the dialysis patients are waiting and hoping for a kidney transplant. The lucky ones have family members whose kidneys are a suitable match and who are willing and physically able to donate a kidney. The Dialysis Unit staff works with both the donor and the patient.

"All donors have some ambivalence" says Susan Kovnat MSW, the Nephrology Section's social worker.

"Some donors feel they have to do it; others feel it's a return for a favor; others just want to be in the family spotlight. Often donors feel bitter after the transplant because the recipient receives an enormous amount of care and attention, while the donor leaves the hospital soon after the operation and is forgotten.

"I think it is very important to follow up family members who are donors, even if they are not posing any pressing psychological problems. We don't want them to feel forgotten," says Ms. Kovnat.

One of the most crucial elements in the patient's adjustment is determining whether or not he will be able to work.

The job of Lynn Reno, M.A., is

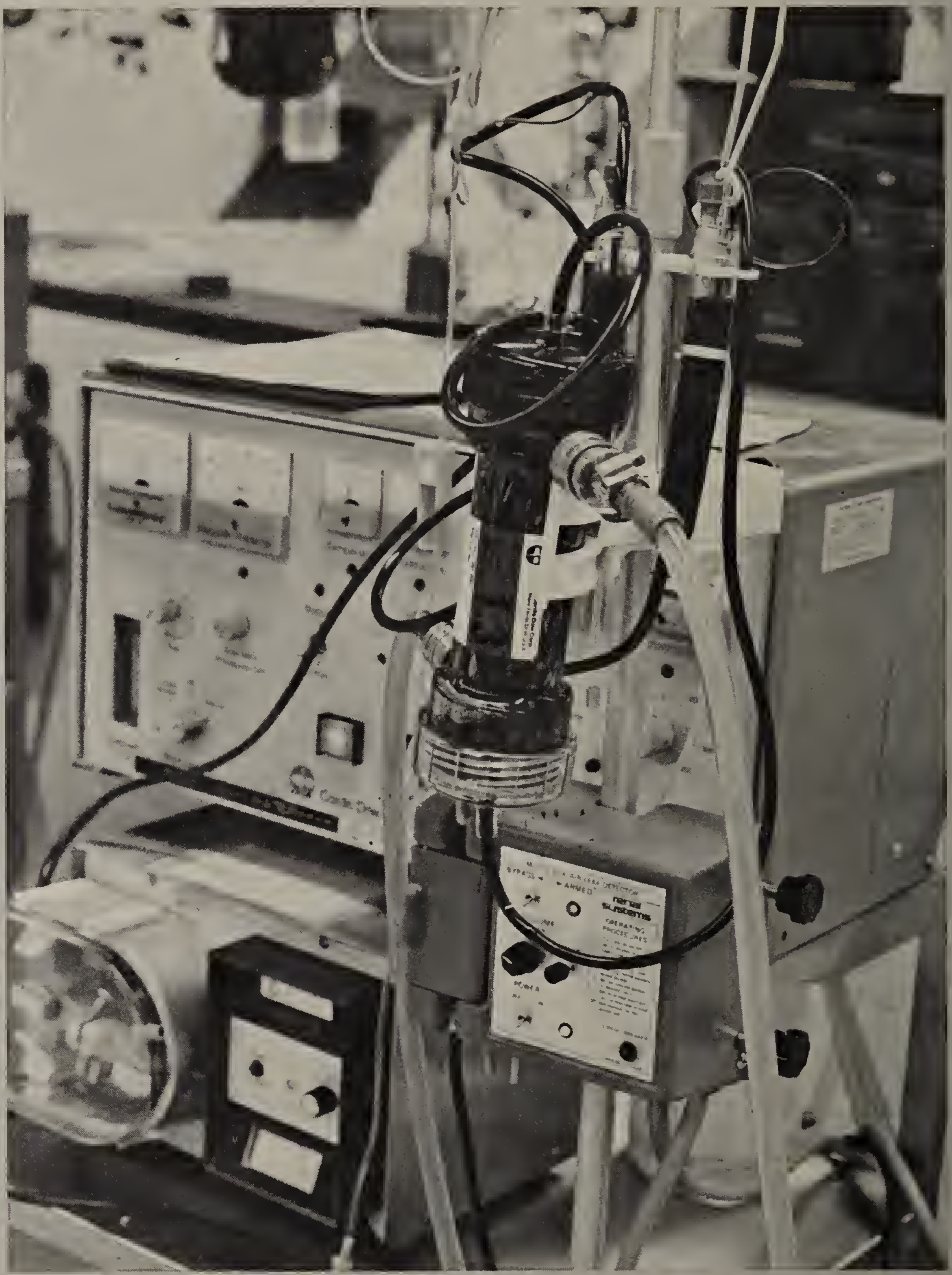
Terry Slowick, R.N., Head Nurse, Dialysis Unit, with a patient on dialysis to help them deal with that problem. Ms. Reno, M.A., the unit's rehabilitation specialist, is a psychologist trained in vocational counseling.

"Our patients usually have no idea of what resources and possibilities are available to them" she says. "But resources don't do them any good if they're not ready to use them. I spend most of my time helping them get ready through intensive counseling."

Spending 12 to 18 hours a week on a dialysis machine makes a 40-hour work week difficult, but some patients manage it. The unit is open evenings and Saturdays to accommodate patients who work during the day and when they are transferred the staff makes certain that it is to a unit with similarly flexible hours so that there are no barriers to the patient's vocational rehabilitation. Social Security disability payments are available for those who are unable to work. However, Social Security offers a nine-month trial work period, during which time the patient is permitted to work part-time or full-time and continue to receive benefits, so that he and the Social Security Administration can decide whether or not he can handle a job and what type.

Ms. Reno is the patient's advocate with employers. She says it's much easier to convince an employer to take a patient back, than to convince an employer to hire someone who is on dialysis. She reassures employers and potential employers about many of the concerns they have, particularly their fears that the patient's expenses might eat up the company medical insurance plan.

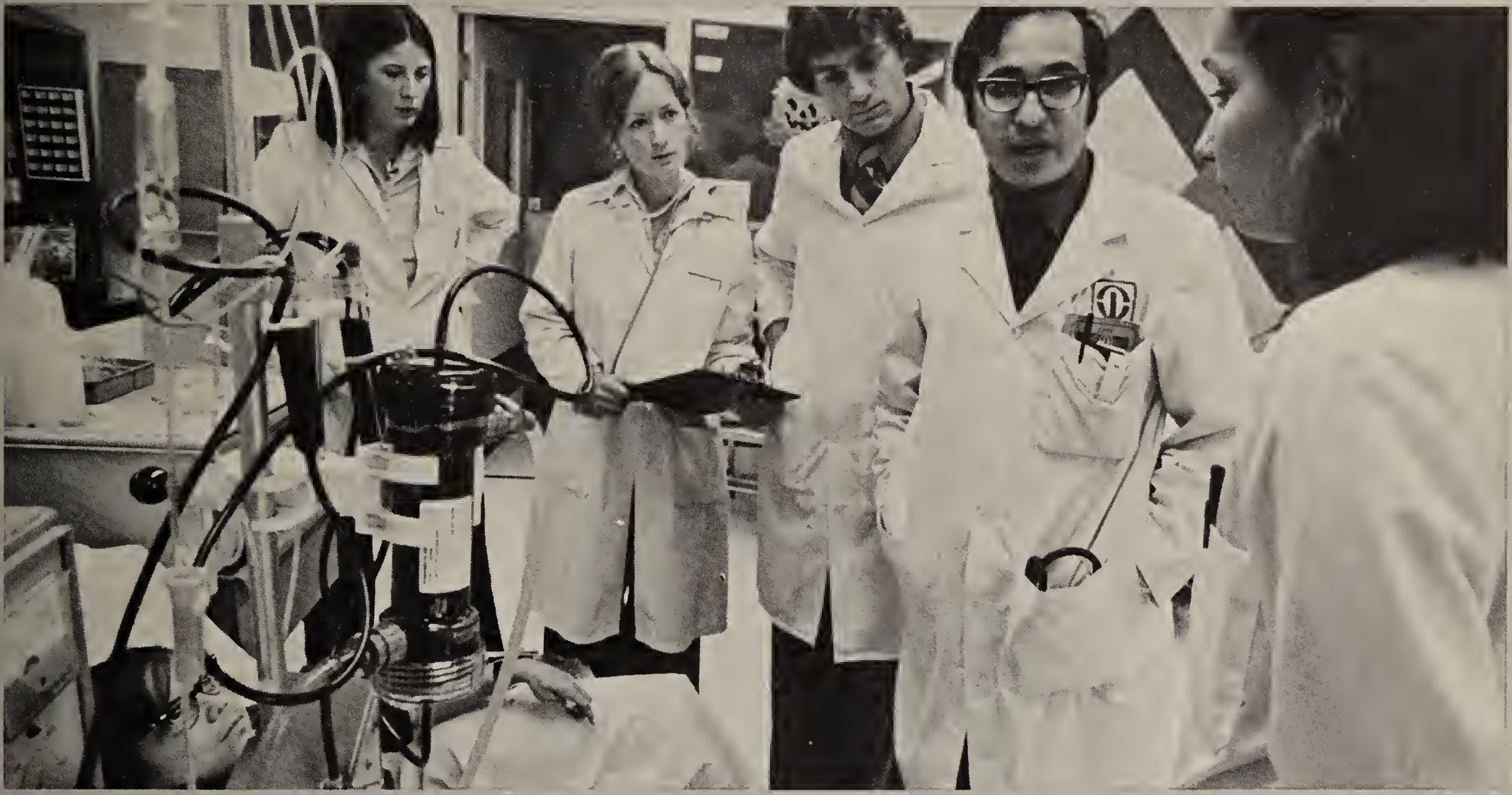
She also has developed a home program enabling patients to do proofreading and other work on a part-time basis at home. This is particularly helpful for those patients who are not well enough to go out to work.


Hemodialysis machine

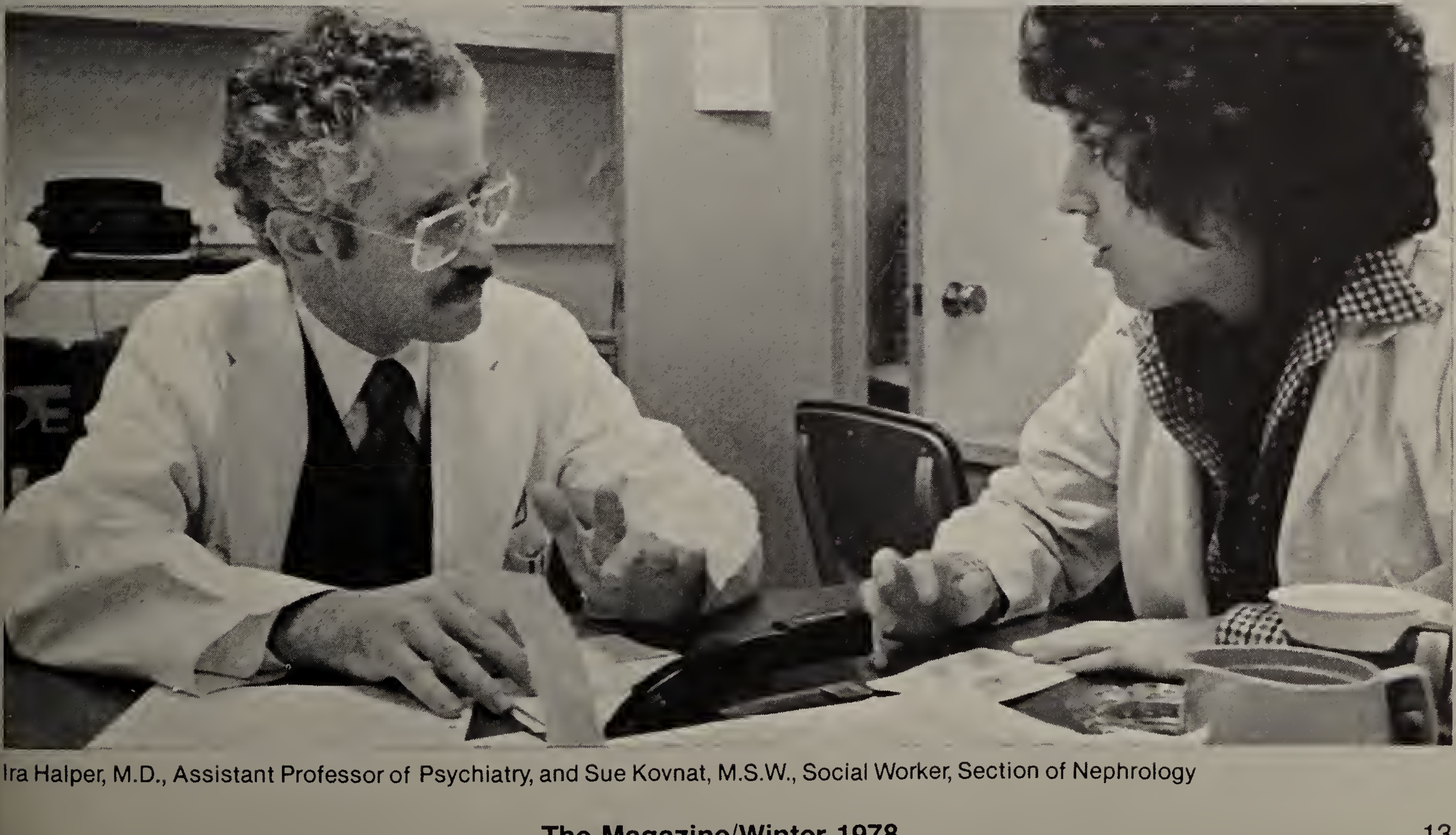
Helping patients maintain emotional stability in the face of overwhelming physical problems is a job which the entire Dialysis Unit staff shares, no matter what their daily responsibilities.

"We have one patient who calls in every few months to say that it's just too painful, it's not worth it. We all talk to her and she comes back," says Lynn Reno.

"We are sensitive to the fact that we must challenge, but at the same time we must be supportive and empathetic."



Dialysis Unit staff meeting



Ira Halper, M.D., Assistant Professor of Psychiatry, and Sue Kovnat, M.S.W., Social Worker, Section of Nephrology

Kidney Procurement: A Round-the-Clock Effort to Save Lives

Several years ago, during a severe snowstorm, Frederick Merkel, M.D., received an urgent telephone call at Rush-Presbyterian-St. Luke's Medical Center.

A young man was dying of brain injuries at a Kankakee, Illinois hospital, and his family wanted to donate his kidneys.

After determining that the kidneys were healthy, Dr. Merkel rushed to a limousine waiting to take him to Kankakee. He planned to remove the kidneys and place them in a perfusion machine where they would be kept viable until they could be matched to a patient with end-stage kidney failure.

In the raging storm, the limousine got stuck. The one-hour trip to Kankakee took a total of 12 hours, and it was only with the help of the Illinois State Police that Dr. Merkel finally made it to the hospital. He rushed to the operating room and removed the kidneys. Forty-eight hours later they were transplanted into two patients whose own kidneys were no longer functioning.

While Dr. Merkel and his team still use the limousine ambulance service to get them to hospitals in the city and its environs, they are more apt to use chartered jets or helicopters in their quest for available kidneys from more distant locations.

"I operated on a donor in Elkhart, Indiana one night, flew to Midway the same night, boarded a plane to Peoria and operated on a donor there," he recalled recently.

Dr. Merkel is director of the Section of Organ Transplantation in the Department of Surgery and is president-elect of the American Society of Transplant Surgeons. He also heads one of the nation's most successful kidney procurement programs. He and his staff procure and preserve more kidneys than any other group in the Midwest, and have made kidneys available for transplant to end-stage kidney disease patients around the nation. Dr. Merkel also has developed a number of procedures and techniques for kidney removal which are being used worldwide. In the past five years, his federally funded program has provided close to 300 cadaver kidneys from 45 hospitals which

Kidneys in a perfusion machine prior to transplantation were later transplanted to patients at 35 centers around the country.

Of the 50,000 patients in the U.S. currently undergoing dialysis, about half are suitable for a transplant from a cadaver donor. While a kidney from a related donor is usually the best match, for one reason or another these patients do not have a family member able to donate a kidney. For example, there may be a sibling whose kidney tissue type is a perfect match but who is diabetic or who has some other illness which makes donating a kidney impossible.

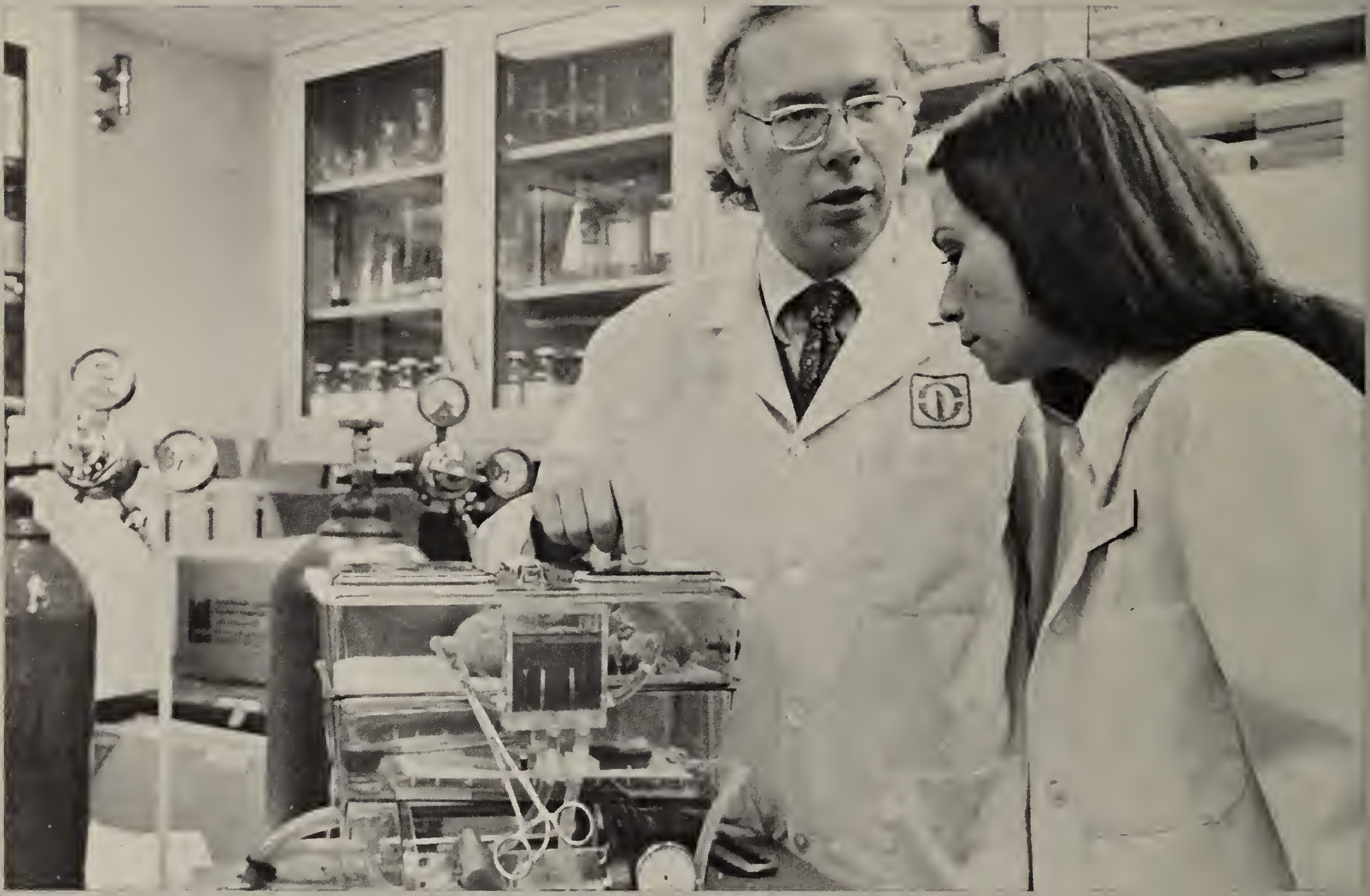
Getting a healthy kidney from a dying donor to a needy dialysis patient is an intricate process which requires split-second timing, expert medical management, and the sensitivity to work effectively with a wide range of health professionals in different institutions as well as with the often distraught family of the donor.

Dr. Merkel's organ procurement group is on call 24 hours a day, and has developed a network of 65 hospitals throughout Illinois and the adjoining states who contact them when a potential donor is available. They also have developed a widely used protocol or set of criteria which tells physicians how to handle the dying patient in such a way that the kidneys are not injured.

Setting up this network has required many hours of hard work for Dr. Merkel and his procurement coordinator, Paul Volek, M.P.H. A major aspect of this effort has been education—educating other physicians, nurses and the public to the need for kidneys. Dr. Merkel and Mr. Volek have given hundreds of lectures at hospitals and have met privately with scores of physicians.

"We've tried to interest doctors

Kidney transplant operation



Frederick Merkel, M.D., Director, Section of Transplantation, Department of Surgery, with perfusion technician

in the importance of the gift of life," says Dr. Merkel.

"If someone is going to die, what makes relatives feel best is the gift of life. Often, they don't realize it until months or years later.

"But doctors have to be convinced first. Some may have guilt feelings or may feel that they have let the patient down. Others are unsure about the definition of brain death. Others just don't want to be involved in the extra work or are afraid of lawsuits. We try to help them in every way possible, and we try to help families feel that some satisfaction can come out of a horrible situation."

"Sometimes the whole thing is initiated by the family," says Mr. Volek.

"A lot of families already have discussed the matter and made a decision. And the people who make this kind of decision are not necessarily the most sophisticated or best educated. We had a mother with only an elementary school education call us directly. We get about a dozen calls a month, mostly late at night."

Besides Mr. Volek, Dr. Merkel's group includes two perfusion technicians, who are responsible for the preservation of the kidneys, keeping them viable between the time they are removed from the donor and the time they are implanted into the recipient; and seven medical students who help out on a part-time basis. All calls are answered within 15 minutes.

When the procurement program's 24-hour answering service receives a call from a potential donor, whoever responds first ascertains whether the donor is suitable (is under 65 years of age with no kidney damage, overwhelming infection or other serious disease such as cancer or diabetes); and then gives instructions to the physicians at the scene based on Dr. Merkel's protocols. A member of the program then leaves for the donor hospital.

"Most physicians on the scene feel relieved when someone shows up," says Mr. Volek, who often is the one to make the initial trip.

"We check the condition of the patient, suggest medication, make sure the cardiovascular system is adequately supported and that there are no overlooked reasons why the patient is not suitable. Kidney function tests are conducted and the kidneys are not removed unless it is absolutely certain that they will be useful.

"As soon as we set up a time plan, I call for the perfusion machine," says Mr. Volek. "That goes out with Dr. Merkel and the technicians."

"Sometimes a potentially suitable patient is identified before brain death has occurred and Dr. Merkel calls in instructions which are aimed at restoring normal physiological conditions, and which could have the effect of saving the patient's life.

"Out of 1000 donor calls, we've had three patients who have revived as a result of our treatment," he says.

"This treatment restores homeostasis and can save the donor's life if that is possible."

Dr. Merkel has developed a special surgical procedure for removing the kidney from the donor, known as the Merkel Technique, which is widely used by surgeons around the country. The aim of the technique is to remove the delicate kidneys without incurring damage. The abdomen is opened and all organs in front of the kidneys are swiftly excised. The kidneys are perfused with a cold preservation solution, removed "en bloc" with the major vessels of the abdomen, and set into a basin of ice cold salt solution. The kidneys are then dissected, extraneous fat and blood vessels are removed and they are put into a portable preservation machine and perfused with a specially prepared cold plasma. Dr. Merkel has found that the kidneys can be kept viable in this way for up to 67 hours.

The perfused kidneys are rushed to the Medical Center, and the spleen and lymph nodes are rushed to the tissue typing laboratory of the University of Illinois Medical Center, which has records of the tissue types of all patients in the state who are awaiting transplantation. "We try to avoid as many difficulties as possible and try to get as close a match as possible," says Dr. Merkel. Each month these waiting patients send in serum samples so that there is a regular record of the kind and amount of antibodies they have. Too many disease-fighting antibodies make transplantation difficult or impossible, since antibodies specifically directed against the kidney can destroy it within minutes or hours of the transplant. The patient's blood type also is recorded since kidneys only can be transplanted to patients who have the same blood type as the donor.

Dr. Merkel and his associates attempt to have the kidneys transplanted in Illinois. However, if there are no suitable recipients, the tissue typing information is shared with similar laboratories around the country through a computer hookup called UNOS, the United Network for Organ Sharing. In this way the kidneys can be matched to needy recipients in the most effective fashion.

"We're trying to improve the sharing mechanisms internationally as well," says Dr. Merkel.

"If we had better sharing, we'd get more perfect matches and thus less chance of rejection. Right now, we have *45-50* percent success in transplanting kidneys from cadaver donors. If we had better sharing we could get 75 to 80 percent success, as we have in related donors. My dream is to have an international clearinghouse, so that every time you have a donor you could get a perfect match with someone somewhere in the world whose life depends on getting a healthy kidney.

"There are 50,000 people on dialysis in the United States, and the chance of a perfect match is about one in 37,000. So every time you get a donor you ought to be able to get a perfect match with someone if you take the whole world."

Besides his work in procurement and in the actual transplantation of kidneys, Dr. Merkel has many research projects underway to refine these processes.

He is studying ways of preserving the kidney long enough to be able to perform more complex immunological studies that go beyond tissue typing, and which might help avoid rejection. He also is studying more effective ways of kidney preservation, the mechanism of the rejection process, the interrelationships between the kidneys and other organs, and the effects of diabetes on the kidney.

For thousands of renal disease patients, transplantation is just a dim hope.

Dr. Frederick Merkel has been trying to make this hope a reality for an increasing number of these patients—not only through his own procurement efforts, but also by establishing procedures and developing techniques to make transplantation of kidneys from cadaver donors a more viable possibility.

continued from page 7

National Institutes of Health. The diversified research and patient care program involves an interdisciplinary group of professionals including nephrologists, trainees, surgeons, pathologists, psychologists, a psychiatrist, social workers, activity therapists, nurses, biochemists, microbiologists and technicians. One of the Section's most exciting research projects is directed by Dr. Lewis in collaboration with Zeev Sharon, M.D., Assistant Professor of Medicine, Nathan Tolchin, D.O., Assistant Professor of Medicine and Melvin Schwartz, M.D., Assistant Professor of Pathology. The project is a study of the effects of protamine-heparin complexes on glomerulonephritis, and may hold a clue to a cure for the disease.

In the course of studying how the kidneys of normal animals get rid of foreign substances which happen to lodge in the glomeruli, the researchers found that heparin, a compound used clinically to prevent blood clots, and protamine, its antidote, formed complexes in a similar fashion to antibodies and antigens. The basic research on how heparin and protamine combined to form complexes was elucidated by Henry Gewurz, M.D., the Thomas Coogan Professor and Chairman of the Department of Immunology at Rush. What Dr. Lewis and his associates did was apply this research to the kidney.

"These protamine-heparin complexes deposit in the kidneys' blood vessel walls, just as do immune complexes," Dr. Lewis says. "However, they do not cause inflammation and damage. Rather, the cells lining the blood vessels of the glomerulus readily engulf these foreign complexes and remove them before any possible damage can occur. They do this rapidly and, furthermore, animals given multiple injections of protamine and heparin for several weeks seem to remove these complexes more and more efficiently.

"The next step was to see whether animals with glomerulonephritis in whom protamine-heparin complexes had been injected could, in the course of removing these complexes, be 'fooled' into removing immune complexes as well, and thereby prevent further inflammatory damage to the blood vessel walls.

"Our preliminary experiments suggest that the development of experimentally-induced glomerulonephritis may be retarded when the animal receives frequent doses of protamine and heparin over the course of several weeks. We couldn't be more excited with these results and we are now testing them further," Dr. Lewis says.

Treating the kidney disease patient, and helping that patient achieve some normalcy in his life style is a demanding job. But before treatment can begin, a precise diagnostic evaluation is necessary. While the kidney biopsy is now virtually routine when renal disease is suspected, patients usually undergo a number of radiographic examinations before they are biopsied, according to Suresh Patel, M.D., Associate Professor of Radiology. An abdominal x-ray points out the size and location of the kidneys and whether or

Jimmy Roberts, M.D., Assistant Professor of Medicine (Nephrology)

"The renal biopsy tells us which pathological process is involving the kidney and to what extent the organ has been changed."
– Melvin Schwartz, M.D.

not they are calcified. A calcified kidney mass often is malignant. An intravenous pyelogram (I.V.P.) almost always is taken. This involves injecting iodinated contrast material, and x-raying the kidneys as they excrete this material. The test makes it possible to visualize the kidneys, ureter, and bladder, and to determine the presence of destructive uropathy, a surgically correctible cause of chronic renal failure.

"X-rays show the anatomy, the macroscopic problems. Biopsies show the microscopic problems," says Dr. Patel.

Dr. Patel believes that computerized axial tomography (CAT) scans, which give three-dimensional pictures of the entire interior of the body, may have an increasingly important role to play in the diagnosis of kidney disease.

"They can be useful if the patient is allergic to iodine and can't have an I.V.P., and to let us know if the kidneys are small and atrophic or large and cystic in people with renal failure."

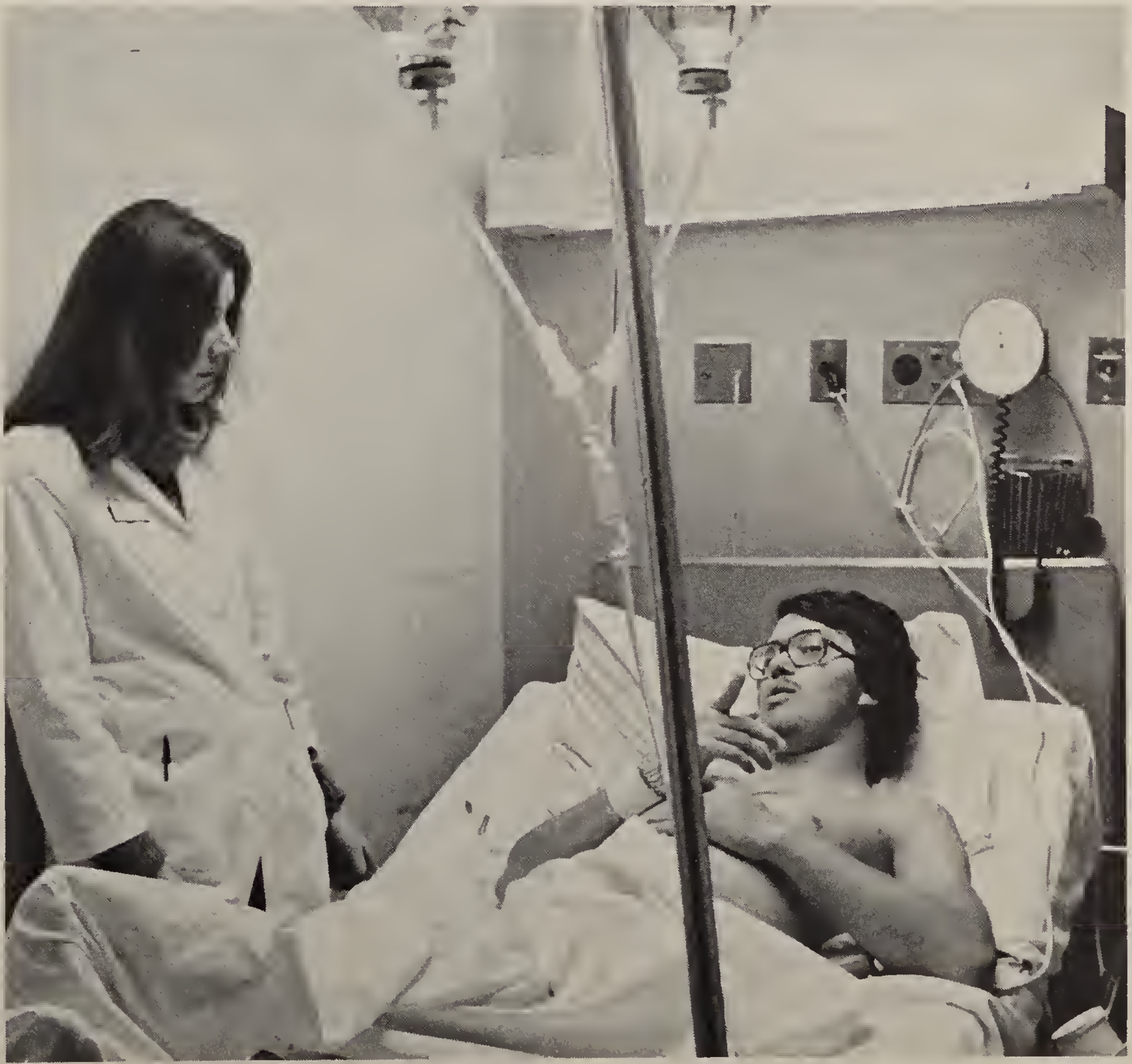
After all the x-rays are completed, most patients with a suspicion of kidney disease are biopsied. Biopsies also are performed on patients who have been diagnosed in the past, to assess the progress of the disease and the effects of treatment. Last year, nearly 200 kidney biopsies were performed in the Medical Center. The patients undergo a blood test to make sure their blood clots properly and then, under local anesthetic, a special needle is introduced into the lower part of the kidneys and a tiny piece is removed for study. The patient remains in the hospital another 24 hours to make sure there are no complications.

Dr. Schwartz, who is a renal pathologist, studies all the renal biopsy material from Medical Center patients and from some of the network hospital patients.

"The renal biopsy tells us which pathological process is involving the kidney and to what extent the organ has been changed," he says.

"In some cases, what we learn about disease activity from the biopsy helps us determine the therapy or assess the effectiveness of treatment. Valuable information is obtained from most biopsies by studying the correlation between what the biopsy shows and the patient's symptoms."

Each week Dr. Schwartz conducts a conference where slides of the biopsies taken that week are shown and discussed by attending staff, house staff and students from the medical center and the network hospitals. Some 25 to 30 people usually attend. At a recent meeting, Dr. Schwartz showed slides of the biopsy of a 23-year-old man described as being in "excellent health." As part of a job physical he had had a urinalysis which was suspicious, and after a thorough clinical evaluation, a biopsy was ordered. Despite the patient's lack of symptoms, the biopsy revealed exten-



Carol Woulf, Nurse Clinician in Nephrology, reviews treatment with a patient from Bloomington, Illinois. He takes a train to the Medical Center three times a week for peritoneal dialysis.

sive glomerular damage. This young man, in "excellent health" just starting a new job, who had been seen by a physician by accident, was suffering from chronic renal disease. It was not an untypical case.

A large number of clinical studies of end-stage kidney disease at the Medical Center have revolved around patients with systemic lupus erythematosus (SLE), a severe, chronic inflammatory disease which affects the skin, joints, kidneys and nervous system, but which may cause disease in any organ of the body. The Medical Center is a leading center for the treatment of this disease due to the presence on the faculty of John Verrier Jones, M.D., Professor and Chairman of the Section of Rheumatology and one of the world's foremost authorities on SLE.

SLE patients often develop renal failure, so often, in fact, that the Sections of Nephrology and Rheumatology are working closely together on a number of studies to try to find the reason, and in doing so perhaps find out more about why kidney disease happens. The two sections work so closely together and have so many patients in common, that their offices are on the same floor of the same building on the Medical Center campus.

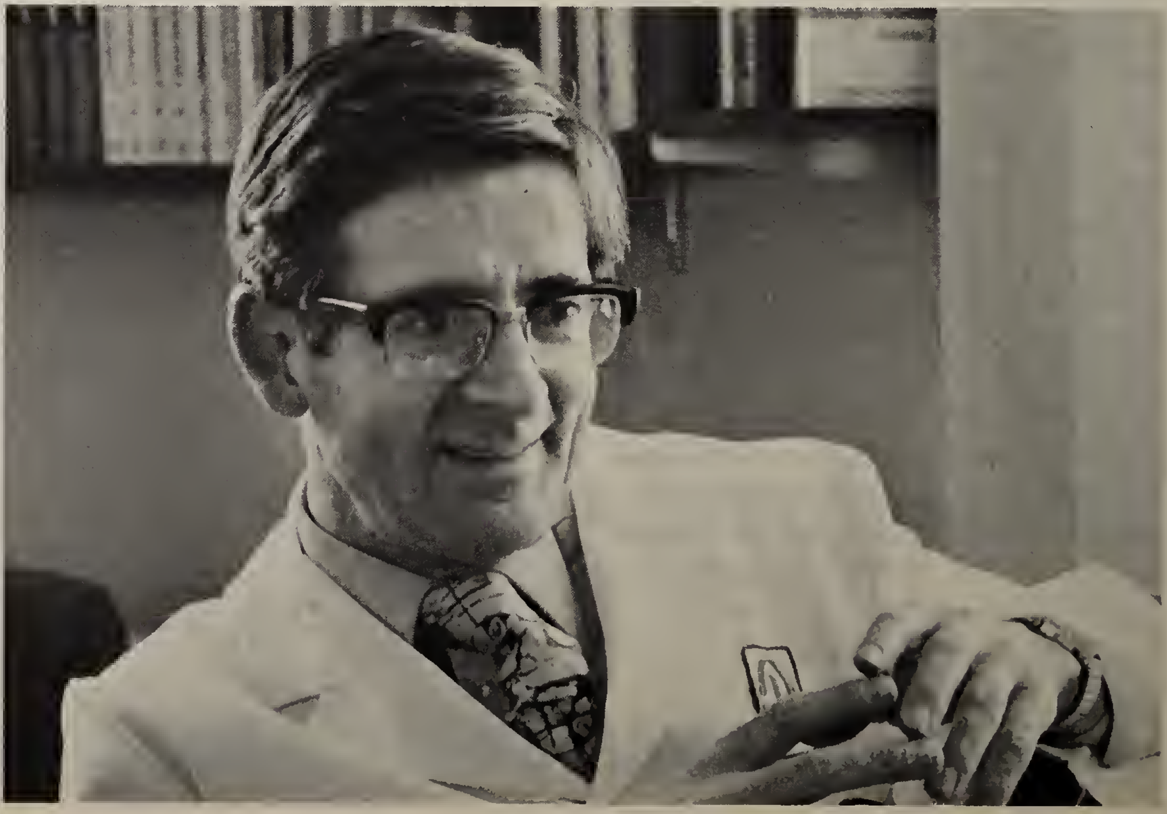
Dr. Jones describes the typical lupus patient as a woman in her 20s or early 30s. The cause of the disease is unknown, but a characteristic finding has been the presence in the serum of antibodies which react with desoxyribonucleic acid (DNA). DNA is the genetic material present in the nuclei of all living cells, which forms the basis of virtually all inherited features of the organism. The reason for the presence of these anti-DNA antibodies in lupus is not known. What is known is that these antibodies participate in the organ damage of lupus. Dr. Roberts and Dr. Lewis have observed that anti-DNA antibodies are not unique to lupus, but can be found in several other diseases and can even be demonstrated in otherwise normal persons who have infectious illnesses.

"This new observation casts a new light on the phenomenon of anti-DNA antibodies and the cause of organ damage in lupus," Dr. Lewis says. "Are anti-DNA antibodies part of the normal response to inflammation? Is there some abnormality in lupus patients which prevents normal control over anti-DNA antibody production? Is the antibody produced in lupus somehow more capable of promoting inflammation than that found in normals? And so on." Many of these questions are now being studied by Dr. Lewis and his associates and by Dr. Jones and his group, working cooperatively.

Among lupus patients, one can predict who will have renal failure, Dr. Jones says. Patients at risk usually have huge amounts of antibody-antigen complex, and very active lupus disease. Those patients who are identified as being at risk are given renal biopsies annually.

"The only way we can tackle the kidney disease is to tackle the rest of the lupus," says Dr. Jones.

The most common way of treating lupus is through the use of steroids, anti-inflammatory drugs which also suppress the immune system and thus make the patient much more susceptible to infection, and which have a number of other unpleasant side effects. Dr. Jones has been experimenting with a new treatment that he believes holds considerable promise, called plasmaphoresis. This involves removing all the plasma from the patient's blood (the



John Verrier Jones, M.D., Professor and Chairman, Section of Nephrology

> *"The only way we can tackle the kidney disease is to tackle the rest of the lupus."*
> *– John Verrier Jones, M.D.*

plasma contains immune complexes) and replacing it with normal plasma. The theory behind this is that in some patients the normal system for clearing the body of immune complexes may be overloaded. If the overload is reduced and replaced with a normal system, the normal system might take over. So far Dr. Jones has successfully treated four patients by this method.

Tying the areas of nephrology and SLE together is the work of Michael Robinson, M.D., a young Australian physician who is a Fellow in both Nephrology and Rheumatology and who specifically studies SLE patients with renal disease. He is trying to develop a test which will detect and measure circulating immune complexes to see if the immune complexes in these SLE patients correlate with the extent and type of renal disease, to see how therapy affects them, and to see whether or not this is a useful way of following these patients through therapy. He also will look at the immune complex levels of patients before and after plasmaphoresis. While at present one can generally predict which lupus patients will suffer renal disease, Dr. Robinson hopes that his test will offer a precise measure and will make early detection and therefore more effective treatment possible.

Preparing kidney tissue from a biopsy for examination under an electron microscope. The machine is an ultramicrotone.

Besides his research on DNA, Dr. Roberts has been trying to identify what conditions are associated with circulating immune complexes. One of the things he is trying to do is to identify the antigens that may be responsible for initiating the entire series of events associated with circulating immune complexes. Several antigens may be present in the complexes, with antibodies directed against each antigen. In several complexes, there is more than one type of antigen and more than one type of antibody. He is studying a group of lupus patients to see if their circulating immune complex levels correlate more closely with the actual level and intensity of their disease than other laboratory parameters. The preliminary data show that the level of circulating immune complexes, and the level of disease activity, correlate very well. Furthermore, the data reveal that changes in the circulating immune complex levels occur earlier than clinical symptoms, thus offering a clue to how the disease is progressing. This is now being used as a marker. If the circulating

Lynn Reno, M.A., rehabilitation specialist, dialysis unit, with patient

immune complexes go up, the physicians don't taper off the anti-inflammatory steroid medication and may even increase it. All that's required to check is a simple blood test. Since patients with lupus who have renal disease are usually very ill, they need to be seen weekly or biweekly and therefore can be monitored very closely. Dr. Roberts is hoping to develop several tests for measuring immune complexes. He and Bruce Bartlow, M.D., a Fellow in Nephrology, also are trying to identify a non-antibody factor that produces inflammation in a form of glomerulonephritis called membrano-proliferative glomerulonephritis. Called C3Nephritic factor, it appears to produce its damage by activating the complement system without requiring antigen-antibody complexes to be present. Drs. Roberts and Bartlow are isolating this factor to learn how it causes its damaging results.

"We try to correlate what's happening with the patient with what's happening in the test tube," Dr. Roberts says.

Besides his participation in the protamine-heparin studies, Dr. Sharon is trying to develop an animal model for studying a specific type of glomerulonephritis.

"We know what the disease looks like histologically and clinically in humans. But we cannot perform experimental manipulations and test drugs on humans. We need a model close enough to the human entity to enable us to learn more about the etiology and pathogenesis of the disease, and the effects of drugs on it." No experimental models exist so far, but Dr. Sharon is trying to use available data to develop glomerulonephritis in mice and then assess whether the cause of the disease and the effects on mice are comparable to humans.

"We hope that if we can do this it will open the door to important new information on this disease," he says.

Dr. Sharon also is studying a type of nephrotic syndrome which is most common in children, but occurs also in adults. It is characterized by the excretion of large amounts of protein in the urine. However, on biopsy the changes that show up in the glomeruli are minimal. The disease is treatable in children and in a majority of adults, but in some cases it can turn into an untreatable form of kidney disease. Dr. Sharon has a number of patients with this condition who are biopsied regularly and is trying to correlate what is learned in biopsy with the clinical presentation.

Federal support of dialysis has spurred a tremendous commercial impetus to develop smaller, more efficient and compact dialyzers so that more people can be dialyzed in a shorter period of time.

The results have not necessarily been improvements.

Dr. Tolchin, working with Dr. Roberts and Dr. Lewis, was concerned that the "technical development had outstripped the scientific definition of what the dialysis equipment was supposed to be doing. What we wanted to do was look at the effects of these new dialyzers on the patient."

Dr. Tolchin found that some effects were anything but beneficial.

One of the prime characteristics of patients with kidney failure is acidosis—an overload of acid, which they are unable to get out of the blood. One of the functions of hemodialysis is to correct this problem. This it does by a sodium acetate bath which is converted into sodium bicarbonate and neutralizes the acid. The new, very efficient hemodialyzers transfer sodium acetate into the patient between three and ten times faster than the old ones. Dr. Tolchin found that this rapid transfer makes the acetate come in so fast, it isn't metabolized, but just builds up and the bicarbonate is actually being removed. In addition, the body may be using the extra acetate to make compounds other than bicarbonate, for example triglycerides, a factor which may contribute to heart disease in the patients.

"During dialysis with these new machines the patient's acidosis may not improve and may actually worsen," he says.

Dr. Tolchin is looking at ways of modifying this process. He is trying to develop new membranes that would slow down the loss of bicarbonate and the entrance of the acetate into the patient, so that the body can handle it better. For example, different types of membranes could be put in the artificial kidney of the dialyzer.

Several decades ago, end-stage renal disease was considered a hopeless, helpless condition. Today, patients with this disease can lead a relatively normal life, despite the restrictions and inconveniences the disease imposes. Improvements in treatment are regularly being developed. What is perhaps more important is that scientists have made such striking advances in the past two decades in understanding the disease. As more and more information builds up, the possiblity of finding a way to prevent and cure end-stage renal failure now seems more than just a dim hope.

BAXTER TRAVENOL

Family Practice: Training Physicians in a Growing Specialty

By Jean Benzies

"What is family practice? Well, to me, as a doctor, it means that my emphasis can be on people who are maybe just a little sick as well as on those who really need a lot of medical care. It means when one of my patients comes in with a problem, even something very specific, I generally go ahead and check him over completely. If he asks why, I say, 'I'm here to make sure you don't have something that's beginning to go wrong—like early heart disease.' "

Ed Shanik, M.D., a third-year family practice resident at Christ Hospital in Oak Lawn, Illinois, was speaking for himself but his sentiments are echoed by most family practice physicians. "Family practice physician" is a new term for an old concept. Years ago, it was "general practitioner" or "family doctor" (a term many family practice physicians prefer). It means the doctor who takes care of almost everyone: kids, parents, grandparents; and almost everything: colds, arthritis, minor surgery. But family practice, unlike general practice, is not for physicians who decide not to specialize. Far from it. Family practice is one of the most recently established of the twenty-two medical specialties. It requires a rigorous three-year residency after the completion of medical school. The residency program consists of rotations through many speciality areas, including pediatrics, obstetrics/gynecology, surgery, internal medicine, and psychiatry. And, unlike any other medical specialty board, the family practice board requires that each family practice physician take board exams every six years in order to maintain certification.

The need for family practice doctors is great, and Rush is actively involved in training young

Denis Martin, M.D., a third-year resident at the Family Practice Center at Christ Hospital, shows three of his patients exactly how a stethoscope works and explains what he uses it for.

physicians to fill that need. Leo M. Henikoff, M.D., Acting Vice President, Medical Affairs and Acting Dean, Rush Medical College, explained that the Medical Center has a history of commitment to primary care that dates back to 1839, when Dr. James Van Zandt Blaney, a member of the first Rush faculty, opened his dispensary opposite the Sherman House in Chicago. A distinguished century of service followed, service that has been maintained in this Medical Center. The new Department of Family Practice and its programs in the Rush System will help fulfill this legacy. These programs were designed to meet the needs of the community and the educational needs of the student body and graduate trainees. The affiliated network of hospitals was developed in anticipation of the cooperative family practice program that is now becoming reality.

Dr. Henikoff said, "We are committed to the development of quality programs in family practice that will (1) train outstanding physicians to provide comprehensive care to patients of all ages with particular emphasis on the family unit, and (2) train physicians who will be the educators in the field of family practice for future generations of medical students."

Since its inception only a few years ago, the Department of Family Practice at Rush has expanded. It will soon offer a core course to Rush Medical College students and is involved in residency programs at four affiliated hospitals: Christ Hospital, Community Memorial General Hospital, La Grange, Illinois, Swedish Covenant Hospital, Chicago, and West Suburban Hospital, Oak Park, Illinois. Rush and its four network institutions are now training a total of 50 family practice residents, and this number soon will increase to a full complement of 60.

The Medical Center and Christ Hospital are now implementing the Rush-Christ Family Practice Program, in which inpatient experience in the various specialties will be approximately equally divided between the two institutions. This will result in an academic program that offers appropriate educational experience at the two institutions while maintaining the strong community-based family practice orientation to the patient care experience at the Family Practice Center at Christ Hospital.

Erich Brueschke, M.D., Professor and Chairman of the Department of Family Practice at the Medical Center, explained that the foundation of family practice is the training that allows a family practice physician to treat about 95 percent of the patients who come into the office. "This excellence in training is a must. We must train residents to handle situations in which it is too early in the disease to have a diagnosis or to know if there really is a disease. We also must train residents to be aware of their own limitations and to readily seek consultation when indicated but still maintain contact with this patient."

Like the other three hospitals that have family practice residencies, Christ Hospital has a Family Practice Center, an area specially designed to meet the needs of family practice physicians and their patients. When a patient comes into the Center at Christ, he or she goes first to the main reception area, a big comfortable

Holiday decorations, health status, and the quality of the food in pediatrics are among the topics covered by this young lady and her doctor, Bessie Grekas, M.D., resident in Family Practice at Swedish Covenant Hospital.

room with overstuffed seats, small tables, toys for young patients, and health advice prominently displayed: "Eat less saturated fat," "Exercise regularly," "Don't smoke," and a brightly painted sign, "We put the care in health care."

The nurses at the registration desk send patients back into one of four small waiting areas that lead to the 25 examining rooms. The atmosphere is personal and immediate. Facilities include an x-ray room, in which staff members can take x-rays and develop their own film; a small lab for basic examinations of blood and urine; and a minor surgery room, in which the physicians can perform simple procedures, such as removing cysts and warts, repairing lacerations, and casting uncomplicated fractures.

When major surgery is required, the family practice physician refers the patient to a surgeon, but remains the primary doctor on the case. As primary physician, the family doctor monitors the patient's progress while he or she is in the hospital, assists at the operation, and talks with the patient's family about the procedure. The same principle applies for any patient who needs the services of a specialist: the family practice physician always remains the primary doctor.

At Christ, a family practice doctor is available on a twenty-four-hour basis to take calls from patients. Even after hours, the doctor has access to all medical records, which are kept right in the Family Practice Center. And, if an urgent problem arises after the Center is closed, the doctor can have a patient come into the Emergency Room, where an area has been set aside for the family practice physicians.

Ed Shanik, M.D., checks over one of his patients at Christ Hospital while proud parents look on.

The philosophy underlying family practice stresses the importance of the patient's emotional state and its effect on the patient's health. So, family practice physicians at Christ work in conjunction with the Family and Marriage Counseling Service, which is located in the Center, and use the services of a full-time clinical psychologist, J.B. Goebel, Ph.D., who works with patients and trains the family practice residents to be attentive to the psychological needs of their patients and to do their own counseling.

"Every illness has a psychological component that must be treated along with the physical disease," Dr. Goebel explained, for example problems such as ulcers, colitis, and psoriasis. Many patients manifest physical symptoms that have as an underlying cause social or emotional problems, such as trouble in school or on the job. In emotional problems, as in all areas of family practice, it is important for the resident to develop a sure sense of what he or she can handle and what must be referred.

"A lot of it is talking, getting to know the patient, earning their confidence," explained Bessie Grekas, M.D., a first-year family practice resident at Swedish Covenant, who is doing a pediatric rotation at Presbyterian-St. Luke's Hospital. "You act as a person, not just as a physician." Dr. Grekas likes to do her own counseling if she is comfortable with the patient and if she feels she is getting correct feedback. However, she refers the patient or asks for help as soon as she feels herself getting in "over my head." She cited the case of an 18-year-old patient, a male with severe abdominal pain. There was no clinical basis for the pain and it became clear that it was stress-related. The man's 18-year-old wife had just had a baby and he was out of work. Dr. Grekas knew all this because she had treated the wife throughout her pregnancy, delivered the baby, and continued to care for the mother and child. "While she told me about her baby, she told me about herself, and sometimes the husband would come in so I got to know him, too. By the time you've seen them a few times, you're friends, there's no doubt about it." Dr. Grekas decided the man needed a level of specialized care she was unable to offer, and persuaded him to see a psychiatrist—she went along with him as primary physician and friend.

Allison L. Burdick, Jr., M.D., director of the family practice residency program at West Suburban, said that most family practice physicians feel they are treating not just a disease or an organ but the whole person, and, like other family practice physicians, he feels strongly that this must include emotional problems. "You have to give your patients enough time to talk about anything that may affect the problem at hand. They should never feel that the doctor is honing in only on one thing." He cited the example of a cardiologist who might be extremely concerned about a patient's heart but cannot always answer questions about other problems that the patient may be worried about. Having a family doctor helps avoid that problem because he or she would be coordinating specialists, and explaining what the patient and family need to know about the condition and treatment.

Russell Zidek, M.D., director of the residency program at Community Memorial, agrees. He sees the family doctor as the "head coach" who organizes the approach to a problem, calls in the specialists, and supervises the entire effort.

Philip D. Anderson, M.D., Ph.D., director of the residency program at Swedish Convenant, spent several years as a medical missionary in Indonesia and that's when he learned the value of a doctor who could do just about everything for the patient. "As far as I'm concerned, a family physician is one who is interested in the total care of the patient, taking into consideration that they are integral members of a family, or a social unit that functions as a family." He explained that in such units interactions can affect mental and physical well-being. For example, the family doctor can be called upon to help patients with genetic problems that could have serious effects on every member of the family, their marriages, and their children. Repeated contact with a family doctor, who knows the situation and individuals involved, makes it easier for these people to discuss the question of abortion, the problems of sterility, difficulties in choosing a mate, and the necessity for genetic testing. Or take the simple problem of infec-

"The only thing I'm worried about is how you're going to get this thing off my leg" said a young patient at Community Memorial General Hospital. Family practice residents Melvin I. Glick II, M.D., and Ronald P. Conoley, M.D., explained exactly how the dressing will be removed and assured him that it will be quick and painless.

tion, which can quickly involve a whole family in the medical problems of one of its members. Another example is that of a child who has headaches that have no apparent clinical cause. A family doctor will know the tensions at home, will know the parents and other siblings, and consequently will be able to pick up on these causative factors. Dr. Anderson said, "Medicine has gotten so impersonal . . . which is not to say that a lot of specialists don't take a personal interest. But, now, family practice is attracting the doctors who are interested in and comfortable with that approach to patient care—it's a function they enjoy and do well."

In addition to his duties as director of the residency program at Swedish Covenant, Dr. Anderson is director of continuing medical education for the Department of Family Practice at Rush. This September, the department worked with the Medical Center's Department of Continuing Medical Education to sponsor "Five Wednesdays with Family Practice," a program that offered such diverse courses as "Diabetes and the New Insulins," by Theodore B. Schwartz, M.D., Professor and Chairman of the Department of Internal Medicine at Rush; "Iatrogenic Drug Abuse in the Elderly," by Rhoda Pomerantz, M.D., Associate Professor, Departments of Internal Medicine and Preventive Medicine at Rush and Medical Director of the Johnston R. Bowman Health Center for the Elderly; and "Dermatitis vs. Allergic Skin Reactions," by Marianne O'Donoghue, M.D., Assistant Professor, Department of Dermatology at Rush and attending physician at West Suburban Hospital.

Some critics of family practice say that it is not necessary in urban areas that already have doctors. Not so, said Robert Heck, M.D., who directs the residency program at Christ Hospital. Of course, there is a need for well-trained family practice doctors in rural areas where doctors of any sort are in short supply. But in urban and suburban areas the need is also great—after all, people in urban areas have much the same medical problems as do those in rural areas.

Each of the four family practice centers in the Rush network is attracting large numbers of patients. For example, the Center at Christ opened two years ago and still averages 250 new patients each month.

Dr. Shanik explained that a misconception a lot of physicians have about family practice doctors is that all they see are colds and sore throats. Not so. Family practice doctors see mainly unselected patients and thus are most often the ones to pick up disease—simple as well as complex—for the first time. "As far as I'm concerned, the family practice physician is never bored. We see a lot of interesting pathology." As an example, he told the story of a woman who came into the Family Practice Center a while ago complaining of headaches, eye pain, and trouble walking straight. The family practice doctor checked her over but couldn't find the problem. He called for an ophthalmology consultation but the specialist couldn't pinpoint the trouble, either. A second consultant was called—this time a specialist in neurology worked with the family doctor, but the problem continued to baffle them. Finally, the family doctor sent the patient to what Dr. Shanik referred to as a "superspecialist", a neuro-ophthalmologist at Rush. And now the woman is fine. "See what I mean?" Dr. Shanik asked. "How could you be bored? You do your own workup, if necessary you consult with other specialists, and you stay in touch with the patient and family throughout. You're in at the very start and you follow through every step of the way."

How do the patients feel about family practice? They love it. One woman, whose entire family goes to the Family Practice Center at Christ Hospital said, "I think it's fantastic. The doctor is friendly, he treats you like he really cares. And when I bring the children in, he shows them love. Really. He talks to the children about their problems, not just to me. The kids relate fantastically well to this. They trust him 100 percent and they want to please him.

"I couldn't get over the complete physicals my children were given. None had ever had a blood pressure taken before coming here. And the doctor is so careful to explain everything to them and to me. And the nurses, too—you walk in and it's 'hello' with a smile. Even when you call for an appointment, they will break their necks to get you in when you want. We've come in here for many different things, my husband has a tennis elbow, I have some back problems, and the kids have their problems, too. And it's nice that when we all say 'my doctor', we mean the same guy." ⓡ

Rape Victim Advocates: Helping Women in Crisis

By Debora Wojak

Cindy Mitchell had been trying to fall asleep, but she wasn't comfortable in unfamiliar surroundings. Suddenly, a loud beeping noise sounded. She jumped out of bed groping in the dark for the alarm, but quickly realized that the beeping was not her clock. She had been spending the night in the on-call room, and she was being paged to assist a rape victim in the Emergency Room.

As she hurriedly began to dress Cindy looked at the clock. 11:20. Friday night. She wondered under what circumstances the woman had been attacked. Had she been walking alone? Maybe she had been returning from a movie or bar when a man, or two men, approached her. Would the woman be all right? Would medical complications come up? As she closed the door of the room and ran for the elevator, she reminded herself, "I will explain to the woman that I am here as a friend, to listen if she wants to talk."

When she arrived in the Emergency Room of Rush-Presbyterian-St. Luke's Medical Center about five minutes later, the nurse told Cindy that the rape victim was already in the examining room, waiting for the doctor. Cindy put down her coat, took a deep breath, and walked toward the examining room.

A young woman named Laura, about 20 years old, sat on the examing table, crying. Cindy stood at the foot of the table and hesitantly said, "Hello. My name is Cindy Mitchell and I am a volunteer advocate with the rape victim's assistance program here. We want to insure the best possible care for rape victims brought into the Emergency Room. I am here to help you in any way that I can."

The woman looked up blankly. Cindy repeated, "I am here to help you. Would you like me to stay?"

The woman said, "Sure. Do you have a Kleenex?"

Cindy realized she was shaking. "If I'm nervous, imagine how this woman must feel after what she has just been through." As she handed Laura the Kleenex, Cindy

Advocates listen attentively as program director Julie Freischlag (seated) explains that volunteers are consistently needed in order for the Rape Victim's Advocate Program to survive.

was motioned to a chair by the doctor who would be examining Laura. He was preparing to explain what procedures would be necessary during the examination. Before he began, he asked Laura if there was anything else that Cindy could do for her right now. "Has your family been called yet?" Laura shook her head. "No, my roommate is away for the weekend, and I'm not sure that I want to call my parents right now. OK?"

The doctor and Cindy nodded their agreement. "As long as you're of age, Laura, we aren't required to call anyone," Cindy explained. "Is there someone in the family or a friend that you can talk to about this once you leave the hospital tonight?"

Laura said, "Yes, there is."

After the examination was completed, the nurse came in to collect the specimens that needed to be sent to the lab. The nurse told Cindy the police had arrived, and were waiting to question Laura. Cindy said, "Would you tell them that she hasn't finished dressing?"

When Laura was dressed, she asked, "Now what happens?"

Cindy explained that although the hospital was required to report all rape admissions to the police, the rape victim was under no legal obligation to discuss any aspect of a rape incident with the police. "But we recommend that you give the police all the information you can because a crime has been committed, and the suspect must be caught."

Laura was not convinced. "What kinds of questions will they ask me? It will probably be so embarrassing!"

"These are beat officers, who have been patroling the area around the Medical Center. They have come because they were called about a rape admission. They are supposed to ask only those questions which will assist them in apprehending suspects in the vicinity of the assault. They will not go into great detail about the incident itself."

"But what if they do?"

"They probably won't. Usually the police who come to the Emergency Room are very understanding. And if they start asking about the incident, instead of where and how it happened, I will remind them that, according to law, they are out of line. That is the detective's job, not their's. But I don't think that will be a problem."

"OK. But I feel so ashamed. I really made a dumb mistake."

"Laura, you have nothing to feel guilty about!"

"Yes, I do. I guess I forgot to lock the back door when I came home tonight, and that's how he got into my apartment. I turned around in the kitchen, and there he was. It was terrible!" Suddenly, Laura burst into tears. "I really don't want to talk about it. Do I have to?"

"No, you don't have to. But the sooner the police get information the quicker they can begin looking for him. Are you sure that you don't want to talk to them? I'll be with you all the time."

"All right. I know I should," Laura replied.

With Laura's information, the police apprehended a suspect who was later identified by Laura during a line-up, and a court date has been set. A conviction will put him behind bars.

(Cindy Mitchell and Laura are composite personalities based on interviews with several rape victims and rape victim advocates. Real names are used from this point on.)

But what about the victim of the rape incident? How does she deal

Plans for future seminars to be sponsored by the Rape Victim's Advocate Program are discussed by (left to right) Claire McLaughlin, Quality Assurance coordinator for the Emergency Room; John Tighe, assistant administrator, Ambulatory Care Services; and Julie Freischlag, Rape Victim's Advocate Program director and second-year Rush medical student.

with her emotions so that she can begin to forget her experience?

Before a rape victim leaves the Emergency Room at the Medical Center, the advocate makes a follow-up appointment with James Burks, M.D., or Ms. Marilyn Moore. They are in private practice together and are both certified sex therapists. Dr. Burks is also a staff member of the Department of Obstetrics/Gynecology of the Medical Center. They provide emotional support for rape victims.

About three days after the rape victim has been treated in the Emergency Room, the advocate calls the victim to see how she is doing. If the victim requests it, the advocate can refer her to community resources such as the Rape Crisis Center. The victim, however, determines the level of involvement for the advocate.

Certain situations do occur that require the advocate to take the initiative in setting her own level of involvement in the Emergency Room. Child abuse cases are an example. Gentle, sympathetic understanding of both the child's and the family's reactions are very important. The advocate has the touchy responsibility of cautioning the victim's family not to magnify the situation by referring to it as "dirty," or implying in any way that the child is "ruined" or has "lost her innocence." Such an attitude could cause the child to develop severe guilt feelings. And psychiatrists have proven that the child's reactions to a sexual assault may be far less damaging than reactions arising from the imposition of adult values and opinions about the episode. If the physician suspects child abuse, he or she is required by Illinois law to report the case. If this happens, the advocate can be involved in notifying the appropriate agencies.

The Rape Victim's Advocate Program has functioned so well in meeting city and state regulations that it became a model for the Rape Victims Emergency Treatment Act of Illinois. The act, which became effective January 1, 1976, requires that in addition to basic treatment, the hosptial must provide a counselor or advocate for rape patients. The act also states that no victim may be turned away or delayed from receiving prompt treatment because of nonpayment or because an Emergency Room is "too busy."

"The procedure in the Emergency Room is, of course, to treat the person with the greatest emergency first, and this may result in a wait for the rape victim before she receives treatment," explained John Tighe, administrative assistant in Ambulatory Care Services. "During this wait, the advocate plays an invaluable role by providing patients with the consistent support needed to make their wait, examination, and treatment in the Emergency Room less traumatic."

Although the Advocacy Program is sanctioned by and receives support from Medical Center administration, its daily functions remain under the control of those in the program. It was organized by a handful of female medical students and faculty members, and it

After the rape victim has been examined and treated, the advocate assures her that emotional counseling is available. Jan Stanislawski, R.N., staff nurse in the Emergency Room, and advocate Carla Rodgers console the victim. Carla is a second-year Rush medical student working with the program.

began operating in July, 1974. At that time, there were only a few advocates taking turns being on 24-hour call about once a week. Today, the program has expanded to 40 advocates and as a result, the advocates are now on call about once during a six-week period.

The advocates believe that they have created a viable organizational structure for the Rape Victim's Advocacy Program. It was the first all-volunteer, 24-hour-a-day, seven-day-a-week program in the country to assist rape victims. "But we need to have people consistently volunteering to staff it," said Lois Bronersky, former program director and third-year medical student who is now doing a clerkship in medicine at Mount Sinai Hospital Medical Center. "The backbone of the program is leadership. And the people who are currently providing the leadership are students.

"But students can only be involved with the program as long as their academic schedule will permit them to. Summer is the most difficult time to staff the 24-hour call periods since the majority of students are gone."

The advocates have a monthly meeting at which they schedule the 24-hour on-call duty roster. Advocates sign up for duty when it is convenient for them, and will later receive a copy of the completed month's schedule. Julie Freischlag, a second-year medical student who is the current program director, tries to make the meetings convenient by scheduling them during the noon hour. During the meetings, the advocates discuss the problems of handling rape cases, and advise and support each other.

"This fall the meetings are strictly geared to the students' convenience because at present, most advocates are students," Ms. Freischlag said. The current group of advocates are comprised of first- and second-year medical and nursing students, three chaplains from the Department of Religion and Health, and several faculty members.

The advocates are planning two large projects in addition to meeting their regular on-call responsibilities. One is to continue recording statistics, as was done earlier in the program's existence. (Statistics recorded by the advocates revealed that of those rape victims treated at the Medical Center, the largest percentage had been assaulted between the hours of 9:00 and 11:59 P.M.)

The logging report which the advocate fills out after she has responded to a rape assistance call provides all the necessary information to compile anonymous statistics: sex, age, and marital status of the victim; date and time of the incident; whether or not the patient was provided with anti-pregnancy and venereal disease medication; and the date of the follow-up appointment.

The second project being coordinated by the advocates is a seminar on rape prevention. A film and discussion dealing with a plausible rape incident and its aftermath will be presented. Discussion will be geared to explain how the Rape Victim's Advocacy Program functions. "The seminar will be open to everyone in the Medical Center since rape is a potential problem for every woman," Ms. Freischlag said.

The demanding academic schedule of the student advocates is not the only factor that prevents advocates from remaining consistently active in the Advocacy Program. Ruth Becker, a research assistant in Neurological Sciences, had been program co-director and was very active for nearly two years, but is no longer on call. "I needed to get away from it for awhile. Though I no longer take call, I am still active in rape education. I currently sit on the Chicago Hospital Council's Committee on Hospital Treatment of Victims of Sexual Assault, and other community organizations."

Ms. Becker feels that being an advocate taking call can be an emotionally draining experience. "You often get very involved in each person's situation that you handle. Patients have called the advocate after being treated in the Emergency Room, and are anxious to know whether they are going to be all right, and wonder if they will ever be able to forget about the rape incident and lead a normal life again. Once a woman begins to get over the feelings of shame, embarrassment, or guilt she may have developed, she can begin to work the incident out in her mind. I have told patients that they have been the victim of an unfair situation that was not their fault. They can receive excellent counseling through Dr. Burks and Ms. Moore.

"My experiences as an advocate have been very satisfying, because they have been ones of woman relating to woman. There are no race, age, or ethnic barriers when communicating about rape because it is a societal problem which excludes no one. Rape can happen to anyone, at any time, anywhere."

ON MAXWELL STREET WITH DR. BEATRICE TUCKER

From the book **Maxwell Street** by Ira Berkow

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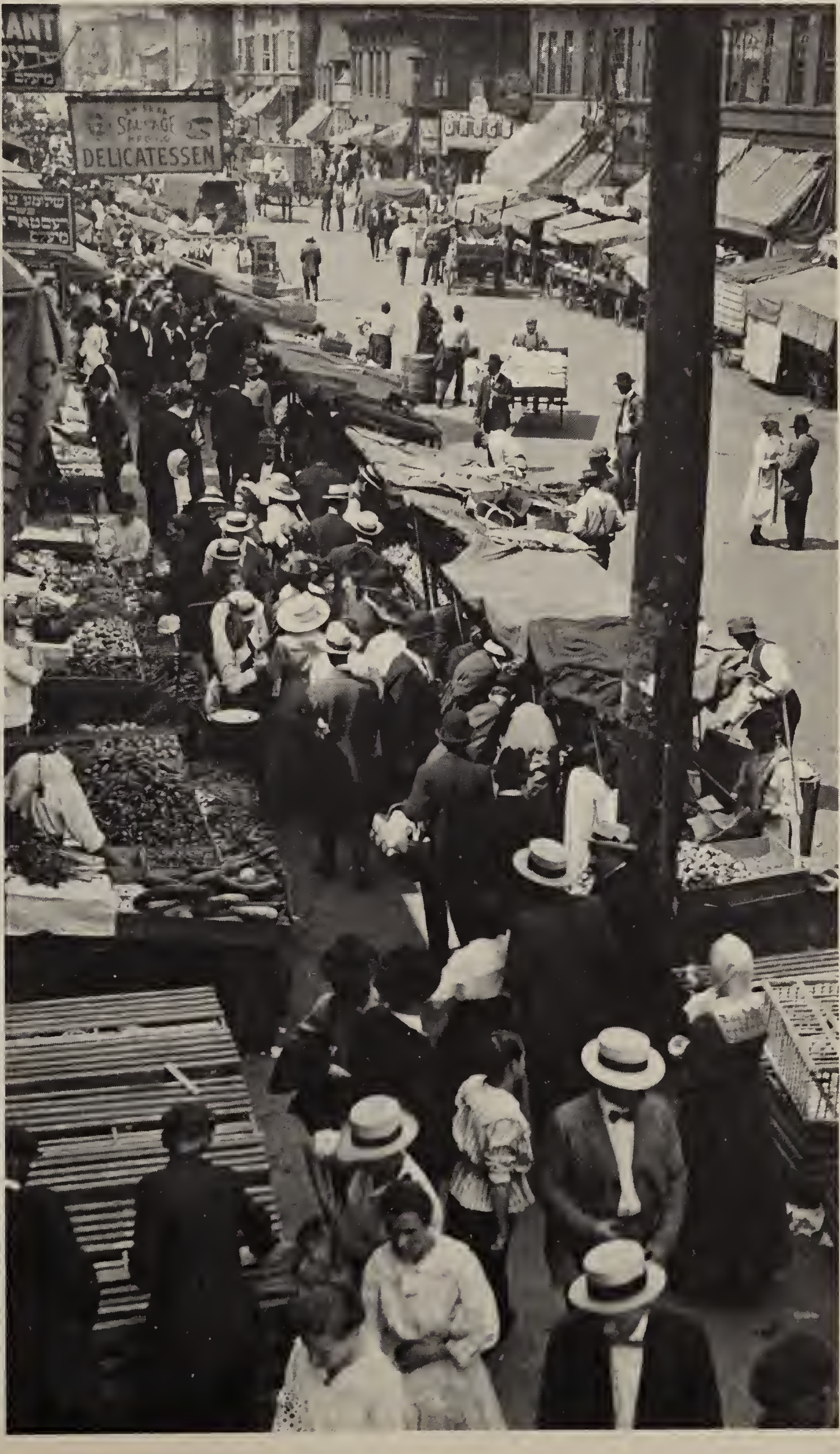
Beatrice E. Tucker, M.D., shortly after delivering a baby at a home in 1975, at age 77. (Photo by Michael Mauney)

Maxwell Street, an open-air market on Chicago's West Side, is named after a Dr. Philip Maxwell who was a surgeon at Fort Dearborn on the Chicago River. Once a mile-long teeming bazaar where thousands of immigrants settled and began new lives, Maxwell Street today is only four blocks, and only one of these mirrors former times. Author Ira Berkow interviewed many of the colorful personalities that lived and toiled in the old Maxwell Street, including Beatrice E. Tucker, M.D., Rush Medical College ('22), former medical director of the Chicago Maternity Center, and recipient of the 1977 Distinguished Alumna Award of the Alumni Association of Rush Medical College.



Sunday market, Maxwell Street, Chicago, 1917 (Photo: Chicago Historical Society)

> —Dr. Beatrice E. Tucker is the medical director of the Chicago Maternity Center (opened in 1932), on the corner of Newberry and Maxwell. In the first year there, she lived in a small dark room in the basement of the building. This made room for the swarm of young interns, medical students, nurses, who crowd this ancient barracks—to watch obstetric demonstrations, to examine rows of expectant mothers, to boil urines in the miserable little laboratory, to catnap while they keep one ear cocked for the telephone that jangles to bring news from expectant poor women all over Chicago. . . .
>
> In her basement boudoir Tucker was blown upon by grime from what's as filthy a street corner as you'll find in our so-called civilized world. Sleeping a couple of hours in the gray of morning after a night of birth-helping, she'd be roused by bawling hawkers and a terrific quacking of doomed ducks of the Maxwell Street Market.
>
> She was called to frightened households where bungling midwives had delivered babies' heads but could not bring their shoulders. Where a baby's head had actually been torn off by an incompetent attendant. Where an agonized mother had been found on the floor by neighbors, with her baby half-born and on the verge of a deadly rupture of her womb. . . .
>
> This tall woman, always carrying her black obstetrician's satchel, might come back tired from a vigil against a mother's threatened disaster. In front of the building of the Center, she'd notice a crowd of people peering at the just discovered body of a gangster done to death. She'd forget her tiredness. This was life.
>
> *Paul de Kruif,*
> *THE FIGHT FOR LIFE,*
> (New York: Harcourt, Brace, *1939*),
> pp. 89-90.

James A. Campbell, M.D., Beatrice Tucker, M.D., and Terrold Butler, M.D., at presentation of 1977 Distinguished Alumna Award.

Shortly after her seventy-fifth birthday, on October 9, 1975, Dr. Beatrice Tucker came out of quasi-retirement to deliver a baby at the mother's home. It was a relatively easy affair, in clean, efficient surroundings and was reminiscent of her delivery of her first grandchild on a kitchen table a few years back. (She never married but became one of the first women in Illinois to adopt children.)

The delivery wasn't like that of the old days as described by de Kruif. All that and more occurred in Dr. Tucker's forty years as director of the Center, from 1932 to 1973. In that time, the staff delivered over 100,000 babies in private homes. And the Center was where obstetrics was taught to hundreds and hundreds of students, doctors, and nurses. It was the only home-delivery service in the United States staffed by physicians. Shortly after Dr. Tucker retired, the Center itself closed its home-delivery service for lack of staff and, conceivably, lack of inspirational leadership.

De Kruif called Dr. Tucker "the woman of the future." She calls herself, today, "the last rose on the bush."

She became the first woman resident at the University of Chicago Lying-In Hospital, in 1929, and worked under Dr. Joseph Bolivar De Lee, a gruff but internationally-respected obstetrician. He was the founder of the Chicago Maternity Center.

Today, Dr. Tucker remains active in medicine. She is a family-planning consultant in prenatal care and adult medicine in a clinic in a Chicago South Side ghetto.

She is nearly six feet tall, trim, with short fluffy gray hair, owl-rim glasses, a quick, high, delighted-sounding voice. On the evening of one of our talks, she wore a black turtleneck dress with a silver-and-turquoise Apache-made necklace, and black low-heeled shoes with gold Gucci-like buckle and trim. She drives a canary-yellow Volkswagen. Her house is uncluttered, simple. We sat in a small room, and behind her was a painting of a little black girl with a red rose in her hair.

"Dr. De Lee began the dispensary, which was later called the Chicago Maternity Center, on February 14, 1895, Valentine's Day, don't you know," said Dr. Tucker. "Obstetrics was barely a specialty at that time. Doctors knew very, very little about it. The mortality rate was high for mothers; the mortality rate was high for babies. He became expert in prenatal care, learned how to use the forceps, knew how to prevent childbed fever. Dr. De Lee decided that the only way you can teach doctors and medical students and nurses how to take care of, or deliver, a baby is to do it. And the only way to do it, you have to have cases. There wasn't a hospital for indigents outside of Cook County Hospital, and that one was overcrowded. So he started the dispensary. He had a cold-water flat, which was torn down just this year, kitty-corner from the Center.

"Oh, first he didn't have any patients. And he couldn't get any. He was on the fourth floor and pregnant women didn't want to climb four flights of stairs. So he took a first-floor cold-water flat. He put up signs, 'Free Delivery Care,' 'Free Prenatal Care,' and nobody'd come. You see, they were used to midwives. Then he began house-to-house canvassing until he got a handful of mothers. He told them it was safer to have a physician deliver their baby, that the prenatal care was free and that the mortality rate for them and their babies would be less. He was a convincing man. He was able to identify with the needs of the patient he talked with.

"He was Jewish, and this was primarily a Jewish neighborhood then. His father was an immigrant from Russia. I think De Lee changed his name because he had a Russian Jewish name which was, I guess, very definitely Jewish. He said he never denied being Jewish, but he never advertised it, either. He said he never would have got where he did if he had. I think there was a strong anti-Jewish element, especially amongst people who had money, and he had to have money to build a hospital. Sometimes he was treated terribly when he went for a donation. He was once even kicked down a flight of stairs.

"He worked for ten years *'schnoring,'* as he called it. That's Yiddish for begging. His father sold horsewhips. He'd send De Lee out to sell his merchandise, but De Lee couldn't sell it. He'd get his friends to sell it. But he could sell the idea of good obstetrical care because, well, he believed in it. See, I guess he didn't give a damn about a horsewhip.

"He made a good appearance. He was a very handsome man, six feet tall, thin. When I met him, in 1929, he was about fifty years old and had white hair—pretty hair—a white mustache and white goatee. He wore nothing but white in the hospital. White morning coat, white starched collars, white-wash ties, white shirt, and stiff white cuffs. Meticulously groomed. And aesthetic. He wouldn't go to a football game if he could help it. He said, 'I'm not going down there and spend two hours looking at eleven backsides. I think it's downright vulgar.' He was a great teacher and a great obstetrician and was internationally famous in his field. But still, I wasn't 100 per cent sold on him as a man.

"For example. I got my residency when De Lee was out of town. When De Lee came back and found a woman resident, the very first one at Chicago Lying-In, he was not happy. And not long after, De Lee introduced me to another doctor in a meeting. He said, "This is the new resident, Dr. Tucker.' And then in front of everybody, said, 'Of course, she'll never be able to do what you've done Dr. So-and-So.' I was just furious. After this meeting ended I went trouncing into his office and I said, 'Dr. De Lee, I would like to have a word with you.' You'd think *I* was the professor. I said, 'You know, I don't think you are a very nice man. I do not think you have treated me properly. You shouldn't have talked like that. You don't know what I can do. You haven't got the slightest idea of my capabilities. And until you do, I think you should not make any remarks in front of anybody. That staff is my staff as well as your staff.'

"Well, he was quite taken aback and he never did it again. I never did it again. I never had any trouble with him again. I worked like a dog to gain his respect. I'd work forty-eight straight hours. I'd work six, seven days a week. I played up to him like mad. I'd call him in on every case I had. He used twice as much catgut as anybody else. So I did. He used interrupted sutures. I used interrupted sutures. I also did a lot of things that, well, that I'm not too proud of. There was a German book that came out that he said was by the greatest obstetrician in the world. I got the book out of the library. I got a tutor who read German. And I learned to read one little passage. Now, I had an office across from De Lee's. I planned it that way because I wanted to keep an eye on him. So when De Lee's office door was open one day, I opened my door and I sat down at my desk and put this book in front of me. I didn't know how long I'd have to sit there before he came in. Pretty soon he wanders over. He said, 'What are you reading?' I said, 'Oh, I'm reading this book that you recommended.' He said, 'Oh, I didn't know you could read German.' I said, 'Well, maybe not very well'—but I had my little paragraph to read, so I started. 'Why,' he said, 'that's wonderful!' And I said, 'Yes, this passage, very interesting, isn't it?'

"I remember once I gave a speech to a medical society and De Lee was sitting in the first row. He was beaming. It was obvious he was quite proud of me. But he couldn't come right out and say it. The closest he got was one day shortly after in his office. He said, 'Tucker, you did fine with your speech. But you know, you would be top-notch if only you were a man.' Then he began to tell me about experiments in which hens were injected with male hormones and became roosters.

"He said to me—and I really wasn't sure if he was joking or not, I suspect he wasn't—he said, 'Would you ever consider being injected with those hormones?'

"I replied, 'No, Dr. De Lee, I have no wish to become a rooster.'

"Since the maternity center was built in 1908, the board of Directors of Lying-In Hospital had been financing the dispensary on Maxwell Street. By 1930, they didn't have the funds for it anymore. It was the Depression, of course, and they were going to close it down. De Lee felt it was too important a teaching institution to close down, so he convinced them to turn it over to him. All this time, he had been trying to raise money for the Center. You know, he wrote *De Lee's Obstetrics* while possible donors kept him waiting

Beatrice E. Tucker, age 18 (Photo courtesy of Dr. B. E. Tucker) in their offices three and four hours before they'd see him.

"When the university turned the dispensary over to him, he called me in his office at Lying-In. He said would I go down there and take charge of the professional work at the Center? I said, 'Oh, I was going out to make some money in private practice.' He said, 'You don't know enough.' I said, "Well, I've had three years residency in this hospital.' He said, 'That doesn't mean much.' I said, 'Dr. De Lee, that's terrible.' He said, 'Well, if you go down there on Maxwell Street and work in those homes, you'll see more than you've ever seen in the hospital, and you'll be a much better obstetrician when you get out.' I thought, well, if I was going to starve to death, I might as well do what he wanted me to do.

"The first thing, he changed the name from Maxwell Street Dispensary to Chicago Maternity Center. Give it dignity, you know. The building was horrible. It was an old three-story brick building. Most of the window panes had been knocked out by gunshots from the street. The walls hadn't been washed in three years. It had battleship-gray linoleum on all the floors. Clear up and down the stairs. There were no curtains on the windows, except some dirty old torn shades. There were old electric-light fixtures. The pipes were full of sediment. It was old; they were going to shut it down. It was a very dismal-looking place. One night, I had a medical student working in the kitchen when a stray bullet came through the back window and ricocheted around. He dropped down like he'd been shot. It was funny, though it wouldn't have been funny if he had been shot.

"The first thing I did was clean the place up. This was how: We didn't have any money for it, so when we'd deliver a baby, I'd say to the father, 'Well, will you work for ten days? We'll pay you a dollar-and-a-half a day, which will pay for your expenses, and we'll give you your food while you're there.' So they'd come and paint and clean. You see, most of these people were unemployed at this time. We'd go through files looking to see if painters' wives or plumbers' wives or electricians' wives were pregnant.

"We got paint from a woman De Lee delivered who owned a paint store. We ripped out all the linoleum. We got red paint and yellow paint and black runners for the staircase. I had a housekeeper sew little curtains, and I told another doctor, my partner, Harry Benaron, 'We'd better hurry because if De Lee ever sees it, he'll think we're running a whorehouse over here.' In a week it was done. And De Lee came over. I was scared. He thought it was great! I was never so surprised in my life.

"But you could never trust him. He used to come snooping around. He wouldn't let me know when he was coming. I had that basement room. I had taken so many doctors and medical students and nurses, there was no place else, and I wasn't going to ask anybody else to live down there. I didn't care—I was in and out and all over. Anyway, a lady friend of mine and I were sitting and laughing and joking in the room, and you can hear me for a mile. I was roaring with laughter. And I'd had a bath and I didn't have a stitch of clothes on. I was brushing my hair, I had long hair, and I was standing in front of the mirror and De Lee opens the door without knocking. I was just furious at him.

" 'Is there anything I can do for you, Doctor?'

"He turned red as a beet and left. But, you know, I don't know what he thought I was doing there. And he also had his snoopers. This I don't like. 'Cause he's too great a man to act like that.

"One day he comes to me and says, 'You want to join a cabal?'

"I said, 'Well, I don't know what a cabal is.'

" 'Well, that is a group for intrigue and plotting to raise money for the Center.' He said, 'You can raise money.'

"I said, 'I can?' He said, 'Sure.'

"He said, 'Think how fortunate you are. When I started out, I didn't have a single case. You've got thirty-six hundred babies a year to deliver, to take care of.'

"I said, 'I think that's a dubious advantage, Doctor, when you've got no money.'

"And he said, "Well, if you go out in the Sahara Desert and shout long enough and loud enough, you'll get money.'

"He taught me his tricks. He started the Center by first organizing a Board of Directors for the Center. He said, 'If you're going to get money from people who've got it, you've got to be a success. You can't let them think that you don't have anything.' So he used to meet in the First National Bank, downtown where the vaults are. You know, that's pretty swank-looking down there. And the only person who came was Mrs. Mandel of Mandel's Store. And at every board meeting, every month, it was he and Mrs. Mandel. He also said, 'Never name a hospital after yourself because anyone has so many enemies you'll turn off money.' He eventually got a lot of wealthy people on the Board. Most of them there were Gentiles. I don't know how that happened. But De Lee said, 'You know everybody says the Jews have all the money. But all the big money in this town is in the hands of the Gentiles. That's where you go.'

"Oh, I saw everything under the sun down there on Maxwell Street. I delivered babies in alleys, on dirt floors, by candlelight, with a heated iron stove, crawled into attics. I remember one, she was all bled out by the time I arrived. I thought she was going to die. I got the hemorrhage stopped. I got her uterus packed. And I said to the medical student with me, 'I've got to get her in an ambulance and over to Lying-In.' I didn't yet have a setup at the Center. 'She's going to have to have blood if she doesn't die on the way.' We called an ambulance. The ambulance couldn't get their carriage up because the stairs were so narrow. She lived in the rear on the second floor. So I said, 'We'll have to go through the front.' And I banged and banged on the door, and nobody came. So I found an ax and gave it one good crack. And there are these two men in long underwear. They had big beards. They looked like the Smith Brothers. They couldn't speak a word of English. They looked at me, they looked at her, and I tried to make them understand. Ambulance. They finally did, and let the ambulance people out and we got her down. It was in late February, icy night. It was snowing and blowing. You couldn't see anything. They had the siren going and you know the ambulance—hell-bent to get there. Well, there was a broadside collision of a car coming this other way. And this ambulance swung up on the sidewalk, turned around, and it turned the woman over. It knocked the thing that carried her over. It knocked me under that carriage so I broke my little finger. Didn't hurt much. The medical student and the baby were thrown a couple of feet. It didn't hurt the baby any. And the patient improved under this treatment. She hadn't been speaking or anything. Then she wanted to know where she was and what was going on. And I had the hemorrhage controlled by then. All the pinnings of the ambulance were hanging down, dragging on the street. I said to the driver, 'We've got to get her to the hospital. Will the thing run?' He said it would. So we went to the Lying-In with all those things scraping along, and I felt more comfortable because I thought the ambulance couldn't possibly skid with all those things on the ice. We got her to the hospital. Fortunately, the student's blood matched hers, and he was willing to give it to her. We got her transfused and she got along fine.

"And then once I had a breech baby. Feet first. These people lived under eaves, where the whole roof slanted down, and if you stood up any place other than in the middle, you'd knock your head off. The woman was all ready to deliver. One of the baby's legs was already sticking out. The woman had a very bad pelvis; she was forty-one years old, and I knew I couldn't get that baby's head out. I wanted a live baby, of course, and a live mother. So I thought, well, you know, De Lee always said, 'If you don't know what to do, Tucker, you go off by yourself and don't listen to anything anybody says, and make up a plan.' He said the best place to go is the bathroom because nobody can get at you. So I thought of De Lee and I went to the bathroom, and I sat down on the toilet and I thought. All right, I had to stop labor and get her to the hospital. If I let her labor, she'd push the baby out, and it'd get strung up with the head. I had to get the leg back in. I didn't want it dangling all outside and getting contaminated. So I cleaned it up, put the woman to sleep with ether, and then I sewed the baby back into her womb. I had to get her to the hospital. And at this time, I couldn't afford an ambulance. It cost thirty-five dollars or forty-five dollars. I called a paddy wagon. We drove down Michigan Boulevard and I was pouring ether like mad at one end. Because if I didn't keep her labor pains relieved, she'd rupture her uterus and die. When I got her over there, the doctor believed that the baby couldn't be saved and wasn't going to try to do the operation. I said, 'You can't do that to me. I've been working this case for hours now.' I argued and argued. So I finally got discouraged and just sat down and wept. Once in a while that works. And it worked with him. He said, 'All right.' You had to take the woman's uterus out because of danger of infection. But she lived, she got along fine, the baby lived. That case gave me great satisfaction.

"When you deliver in homes, you develop your ingenuity. You don't show your needles. It scares people. And you can make a delivery room in the most shabby surroundings. You can use an ironing board with all your instruments on it, and you use a lot of newspapers. You just don't touch anything. You use sterile gloves. But even with the dogs and the cats and the animals swishing about and the flies all around, very rarely were you in trouble with an infection. It just seems as if people in their own homes are probably immune to the kind of bacteria that they're living in, and they don't have pathological bacteria like you have in the hospital, like Staphylococcus and Strep and this kind of thing.

"I liked living down there. You know how the street is on Sunday now, well it used to be that way every day and all night long. I'd walk along the street and talk with the people and shop. My silver *menorah* came off Maxwell Street and so did my Russian samovar. The only thing, I get a little insulted when these prostitutes would come out and proposition whoever I was with. I got slightly jarred up. I mean, who does she think she is? I identified with Maxwell Street, certainly. I think it's because of my background probably that I fitted in so well.

"My father made his money practicing medicine without a license. He was an illegal doctor. The first nine years of my life, the sheriff was about one step behind us."

Dr. Tucker's father had come to America from a Welsh mining town. The men in his family were coal miners. He refused to go into the mines. He worked in the mines one day and quit. He apprenticed himself to a Jewish grocer in nearby Cardin. Then an aunt in America sent $350 for the boy to come to America. But his father, a heavy drinker, consumed the money on alcohol. In four years, working and stealing what he could, Dr. Tucker's father finally saved enough to come to America. He came over at seventeen, worked in a grocery store in Carbondale, Pennsylvania, and at twenty-three owned the store. He had bad eyes, but nobody there could fit him for the glasses he needed. He enrolled in a correspondence course in optometry, graduated, made himself glasses, then found a book called *Medical Specialties,* and he "settled" on the removal of cancer spots with a "cancer paste" as his area of medical—and, he hoped—financial expertise.

"You put the paste on the cancer," said Dr. Tucker, "and it ate it out. It truly did if you made the correct diagnosis and got it before the cancer was too big. My father was shrewd. He never got in trouble with a patient. But he got in a lot of trouble with the medical profession. His knowledge of medicine was strictly limited, and he wouldn't have been able to pass any of those tests. We went prowling up around Maine, along the Canadian border, so he could get out of the States fast if he got into trouble. And there was a lawsuit against him for going into bankruptcy. I don't know what happened with that. I'm sure he didn't abscond with funds. At least my mother said he didn't. But he did steal that money to get over here from Wales. When I got to be about six, old enough to remember, he changed our name, and told me if I forgot I was Beatrice Harris, he'd end up in jail. I didn't want that to happen. I adored my father. And he loved me, thought I was perfect. I always thought, Isn't he sorry I wasn't a boy? But no, he thought I'd make just as good a doctor as anybody. A damn sight better than the ones he knew. I always thought I'd be a doctor. My father kept talking about it all the time. We had a team of horses and a sleigh up here in the north and I'd go with him all over. Never got caught. He made a lot of money. I went to school. He gave me a very fine medical education, a big allowance, everything I wanted. I did quit working at my studies a couple of times when I got mad at him about what he was doing. But then he settled down, and he had the biggest optometry practice in Southern Illinois. That was legal.

"I liked him. I admired him. He wasn't good for my mother because he had an illegitimate child. He'd be gone on the road for months. And he gambled like a fish. My mother was really a born lady, although she came off a truck farm. She was fastidious and intelligent and I'm sure she wasn't happy about the way he made his living; although when I got old enough to be embarrassed about it, she told me she didn't think it was any of my affair. I was very unhappy. We didn't have a telephone because he was afraid somebody'd trace him. I had to work at being normal. I felt degraded by this then.

"Once I remember my mother getting mad at him too. My father sent my mother two beautiful hats with birds of paradise and egret feathers on them. He sent me three diamond rings. He'd been up in Canada, he wrote, and he'd gotten a farm in trade for taking a cancer off of a woman's breast, and all this stuff came down. I don't know whether my mother thought he was having an affair with a milliner, but she sent those hats back so fast that it made my head swim. And I thought, I hope she doesn't take my diamond rings. She didn't. I was sixteen or seventeen at the time.

"I was never married. I was dedicated to my work. And I never found anybody I loved; but I also wonder if I didn't want to subject myself to the suffering that I know my mother went through. And after my father, I was hungry for respectability, for status.

"And yet I think I identified with my father, with some of his vices, and with a lot of his personality. I wasn't at all like my mother. But I thought if I ever wrote a book I'd dedicate it to my mother, one of God's chosen people. She probably did more for me through discipline and keeping me on a level key than my father did. But my father was, you know, stimulating and of course girls do like this. I think this is pretty normal. But my father was a lovable, vital, wicked man."

At age seventy-five, Dr. Tucker had retired from making home deliveries. "I'm no longer adequate physically, and I think my skills are slipping," she said. An operation is often two hours long, and she says she can't muster the strength for it anymore.

She retired from the Maternity Center in 1973 because the influx of students diminished. More and more universities began broader obstetrical programs. Without residents, the Maternity Center could not continue its program. Today there is only a little prenatal care done there along with some administrative work. It is an old, dark, and gloomy place. It is remindful of the hotel room where Dr. De Lee lived his last days. In 1941, at age seventy-one, he had had a gall bladder operation. Dr. Tucker remembers visiting him. The shades were drawn.

"I would come down and visit him, but he would say, 'I don't know if I'll have time to see you.' Then when I got there he'd talk for hours. They weren't some of the nicest talks we'd ever had. He had got his stocks in order and made out his will and the Center was going nicely and he really had his life all straightened out. And it looked like he was going to die. And then the operation was successful and he recovered. He said, 'I was very disappointed. I was all set to die and now I've got to live a little longer.' I thought he was only half joking. Anyway, he died a year later." ⓤ

RushRounds

ANCHOR Receives Federal Qualification

The ANCHOR Organization for Health Maintenance, based at the Medical Center, has become the first University Medical Center-based Health Maintenance Organization (HMO) in the country to become federally qualified by the Department of Health, Education and Welfare as a staff model HMO.

The announcement was made by Nathan Kramer, President of ANCHOR, and vice president of prepaid health programs at the Medical Center.

The program was started in 1971 by the Medical Center and since then has grown to provide comprehensive health services on a prepaid basis to over 17,000 persons including Medical Center employees and more than 100 industrial firms and governmental organizations in the Chicago area.

As a federally qualified HMO, ANCHOR can assist employers in meeting the 1973 Federal HMO Act requirements which mandate that all employers with 25 or more employees provide their employees with a choice between existing conventional health insurance plans and HMOs.

Mr. Kramer said that HMOs offer several advantages to employers, such as reducing absenteeism caused by unnecessary hospitalization and reducing administrative costs of processing claims that are no longer necessary when health services are provided directly by an HMO.

Senator Charles Percy (left) congratulates Nathan Kramer on ANCHOR's receipt of federal qualification.

The ANCHOR program covers comprehensive medical services in the ANCHOR facilities and in hospitals; hospitalization; diagnostic laboratory and x-ray services and related services.

There are no co-payment or deductibles in the plan which currently enrolls members through employer groups on a prepaid basis.

Milton D. Levine, M.D., Vice President and Medical Director of ANCHOR, noted that ANCHOR thus provides physicians with the option to practice in an alternative health care delivery system with the stimulation that occurs in working with peers in a group medical practice setting.

The ANCHOR medical staff includes a core of primary physicians including family practitioners, internists, pediatricians and obstetricians/gynecologists supported by a broad array of other medical and surgical specialists.

Physicians on ANCHOR's medical staff hold faculty appointments at Rush Medical College and hospital appointments at Presbyterian-St. Luke's Hospital and the Sheridan Road Pavilion.

Other hospitals also utilized by ANCHOR's medical staff include Northwest Community Hospital, Arlington Heights; St. Francis Hospital, Blue Island; Ingalls Memorial Hospital, Harvey; and Alexian Brothers Medical Center, Elk Grove Village.

ANCHOR maintains four comprehensive health care facilities located in the Chicago area. They are located in the Professional Building on the Medical Center campus, at 6033 N. Sheridan Rd. (across from the Sheridan Road Pavilion), and in suburban Arlington Heights and Park Forest South.

NCI Awards $1 Million Contract for Pap Smear Screening System

A three-year $1 million contract to initiate research and development of an automated Pap smear screening system has been awarded to the Medical Center by the National Cancer Institute (NCI).

The research and development will be directed by James Bacus, Ph.D., director of the Medical Center's Medical Automation Unit. He will collaborate with George Wilbanks, M.D., chairman of the Department of Obstetrics and Gynecology, and Ronald Weinstein, M.D., chairman of the Department of Pathology.

Dr. Bacus is hopeful that the system will automatically screen Pap smears three to five times faster than current procedures.

The Pap smear was developed by George Papanicolaou, M.D., in 1927 as a method of detecting cervical cancer by scraping cells from the cervix for microscopic examination. The method became a general gynecologic procedure during the 1940s.

There are at least 70 million women at risk for cervical cancer in the United States. An estimated 16 million Pap smears are done in this country annually.

Dr. Bacus previously developed a computerized blood analyzer which does differential white blood cell counts. That system, called the LARC™ (Leukocyte Automatic Recognition Counter), was put into operation in late 1975. It is manufactured by the Corning Glass Corporation and is in use worldwide.

"The LARC," says Dr. Bacus, "is one of the first medical robots. It is a computer with television eyes that looks at cells and performs a complex visual inspection task."

He adds that a Pap smear scanning system would perform the same functions with specimens of Pap smears.

"Screening Pap smears is a tedious manual procedure," said Dr. Bacus, adding that it "should be feasible to develop a screening system, operated by a technologist, to process between 120 and 200 Pap smears a day as compared to the current rate of 40 a day by a single technologist."

Preliminary plans for the automated Pap smear screening system call for it to scan Pap smears for abnormal cells at the rate of 10,000 cells a scan. If the scan reveals abnormal cells, a computer would review the initial findings before they would again be reviewed, this time by a pathologist, who would then determine the severity of the abnormalities.

According to Dr. Bacus, the automation of Pap smear screening will be a benefit to medical laboratories because the current process often results in "inefficient and insufficient use of clinical personnel."

Dr. Bacus has considerable optimism about the prospects of developing this as an additional screening procedure because "it is an area where breakthroughs can be made based on the technology we've already developed."

Aspirin Found Helpful in Controlling Some Blood Disorders

Research by Medical Center hematologist Kenneth K. Wu, M.D., Associate Professor of Medicine at Rush Medical College and Chief of Coagulation in the Thrombosis Unit at the Medical Center has revealed that there might be a close association between an overproduction of blood platelets, hemorrhage, and thrombosis.

Dr. Wu, who presented his findings at the scientific session of the American Heart Association, indicated that an effective way to treat the problem might be with a combination of aspirin and dipyridamole (Persantin). His research shows that aspirin apparantly keeps platelets from clumping while dipyridamole prevents platelets from sticking to the walls of injured blood vessels.

Dr. Wu's primary research is in thrombocythemia, a condition in which a patient's blood has an unusually large number of platelets due to an overproduction disorder of the bone marrow. Two types of thrombocythemia are essential thrombocythemia, highlighted by spontaneous internal or external hemorrhages, and polycythemia vera, characterized by a sharp increase in red blood cells and total blood volume.

An estimated 10 to 15 thrombocythemia cases are seen annually at the Medical Center, notes Dr. Wu, adding that patients are subject to acute ischemic attacks, which is a narrowing of the coronary or cerebral arteries that reduces the blood supply to the heart or brain, resulting in severe pain. Most patients with the condition are over 50 years of age.

The best traditional long-term treatment has been to lower the platelet count in thrombocythemia patients, but Dr. Wu's research has suggested that immediate relief of ischemic symptoms might best be achieved by reducing the activity of the platelets through drug therapy, as opposed to decreasing their number.

Dr. Wu found that several patients suffering from thrombocythemia had higher than usual circulating platelets aggregate values, that following treatment with aspirin and dipyridamole, not only were platelet abnormalities reduced, but ischemic symptoms relieved. Further testing revealed that when the drug therapy was discontinued, the abnormalities and symptoms returned.

"Measurement of circulating platelet aggregates and of spontaneous platelet aggregation is a valuable addition to the conventional platelet function tests and should be performed routinely in patients with thrombocythemia," says Dr. Wu.

BioService Corporation Established

A new enterprise developed by the Medical Center will allow broader distribution of services and systems developed in the course of its regular activities as an academic health center.

Called the BioService Corporation, the program is headed by James A. Campbell, M.D., chairman, and William F. Hejna, M.D., president. Dr. Campbell is president of the Medical Center and Dr. Hejna is senior vice-president.

They are confident that the program "will provide a linking mechanism with hospitals within the Rush network, with non-network hospitals locally, with hospitals throughout the country and with private enterprise so that new and innovative programs can be made available widely, quickly, and efficiently."

"This is an important function in its own right," say Drs. Campbell and Hejna, and "requires an appropriate expression if it is to be done effectively while safeguarding the Medical Center's primary missions in care, education and research.

"The new corporation will offer to adapt and apply techniques, programs and services proven at the Medical Center, as well as develop health-related management and consultative functions designed for special circumstances of other institutions.

"Opportunities will be sought to assemble scarce manpower talents for cooperative projects and to create economies of scale where possible."

An example of the new services offered by the corporation is management by contract, an activity which the Medical Center has performed successfully at several other institutions in the metropolitan Chicago area and in other

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Computerized physicians' billing and scheduling services are among the shared services being offered by BioService Corp.

parts of the state.

A high degree of sophistication in the area has been tested in the complex environment of an academic health center, the officers said.

In addition, the new Department of Health Systems Management in the College of Health Sciences of Rush University establishes a sound capability for educating the required manpower for this type of undertaking.

BioService will also assist in marketing and support functions in the area of continuing education where increasingly formal ongoing education requirements are being recommended or required of health care professionals. A full calendar of courses is being developed in the three colleges of Rush University—Rush Medical College, the College of Nursing, and the College of Health Sciences.

Evaluate New Anticancer Drugs

Rush-Presbyterian-St. Luke's Medical Center has received a $79,968 grant from the National Cancer Institute (NCI) which will enable William H. Knospe, M.D., director of clinical hematology at RPSLMC to conduct a three-year clinical study to evaluate new anticancer drugs and various new combinations of drugs to treat patients with leukemia and other blood malignancies.

The study is run by the Southeastern Cancer Study Group, a consortium of 20 medical centers nationwide.

Dr. Knospe and his associates have been participating in this ongoing program for the past seven years. They are involved in a variety of national clinical cooperative studies supported by the NCI with emphasis on treatments for patients with blood malignancies.

Evaluation of the data from all 20 participating institutions is a vital part of the study, according to Dr. Knospe, because "no one institution has enough patients to make possible a reliable statistical evaluation of results."

A professor of internal medicine at Rush Medical College, and senior attending physician in the department of internal medicine at Presbyterian-St. Luke's Hospital, Dr. Knospe thinks "new and more effective drugs to fight cancer become available every year as a result of cancer drug screening programs at the NCI."

He added that "drugs active against animal tumors (cancers) must be tested in humans to determine if they are effective against human cancers."

With the increasing emphasis in cancer treatment placed on using combinations of drugs, radiation, surgery, and immunotherapy, another objective of the national study is to evaluate new drugs used alone and in conjunction with these additional therapeutic methods, Dr. Knospe said.

He did note, however, that drugs used in these studies are not widely available, except to patients who have agreed to participate in the study.

Schajowicz Named Visiting Professor

Fritz Schajowicz, M.D.

An internationally known expert in the highly specialized field of bone pathology has been named a visiting professor at the Medical Center.

Fritz Schajowicz, M.D., Director of the World Health Organization's International Reference Center for the study of bone tumors and allied diseases, has been appointed for a 12 to 18-month period in the departments of pathology and orthopedic surgery.

Prior to his appointment to the Medical Center, Dr. Schajowicz was chairman of the Department of Pathology at the Italian Hospital in Buenos Aires, Argentina and Professor of Pathology at the National Medical School of the University of Buenos Aires.

Dr. Schajowicz is one of the few full-time bone pathologists in the world and is completing a book on bone and joint tumors and tumor-like lesions.

While at the Medical Center he will teach his specialty to residents in both pathology and orthopedic surgery. Also scheduled are a series of lectures and seminars by Dr. Schajowicz which will be open to practicing physicians in the Chicago metropolitan area. He will also participate in research projects in both pathology and orthopedic surgery and will be available for consultation to the Rush Cancer Center tumor registry.

During his appointment at the Medical Center, Dr. Schajowicz will continue to head the World Health Organization Reference Center which is based in Argentina. That center has data on over 19,000 cases of bone disease including more than 4,000 bone cancer cases.

One of his best known accomplishments is the development of a special stain now used throughout the world to facilitate the accurate diagnosis of Ewing's sarcoma, a childhood bone cancer.

Dr. Schajowicz said that the kind of interdisciplinary efforts which his appointment at Rush represents have resulted in a greatly improved prognosis for malignant bone tumors.

"Because of the close interdisciplinary cooperation between chemotherapists, radiation therapists, orthopedic surgeons and bone pathologists, the prognosis for malignant bone tumors in children has improved dramatically," he said.

Dr. Schajowicz further explained that "the curability of these types of tumors has grown, from a 5 percent five-year survival rate for Ewing's sarcoma, to up to 40 and 50 percent, and also has become much better in osteosarcoma."

Dr. Schajowicz trained at the medical school of Vienna University. In addition to his teaching positions and his practice, he has been a consultant to hospitals throughout Latin America and has lectured in Europe, the United States, Africa, the Far East and Israel.

He has written five books and hundreds of scholarly papers elucidating the nature of a wide range of bone diseases.

Limb Regeneration: Trying to Unlock The Mystery

Over 200 years ago, Italian scientist Lazaro Spallanzani, fascinated by the ability of some creatures to replace lost limbs naturally, began research into the process of the exact duplication of an original limb.

Spallanzani discovered that regeneration is more complete in younger individuals than in older ones, a theory known as Spallanzani's Law.

His finding was a small but significant breakthrough in the vast, complex and bewildering process of limb regeneration. Since that time, research into limb regeneration has been an ongoing process, and has become a major interest of Anthony Schmidt, Ph.D., professor and Chairman of the Department of Anatomy at Rush University. His research team includes Charles Dinsmore, Ph.D., Frank Hughes, Ph.D., and graduate student Jennifer Guy.

Progress in the study of limb regeneration has accelerated in the past two decades, something which encourages Dr. Schmidt.

"Quite honestly, I think we've made more progress in that time than was made in the previous 100-plus years."

The research in limb regeneration was "solidified in the 1940s," says Dr. Schmidt, but it was not until the last 10 to 15 years that it has become redefined.

The study of limb regeneration is a long, involved, tedious procedure with painstaking efforts needed before even the slightest result can be seen.

That, however, is something researchers have come to expect simply because of the mystical air surrounding limb regeneration research.

"It's like science fiction," says Dr. Schmidt, "how some creatures can reconstruct a lost part which is an exact duplicate of the original limb."

Creatures which seem to have the highest degree of regeneration are amphibians. Tadpoles, salamanders and some reptiles, research has shown, have been among the most successful regenerators. Humans, on the other hand, don't have as great a regeneration capability.

"The best example of regeneration in humans lie both in the skin and bones," says Dr. Schmidt adding that, "there is some degree of regeneration of the peripheral nerves, skeletal muscle and to a lesser extent, the liver and kidneys."

Researchers have identified steps in a regeneration process, and are now concentrating their efforts on determining what sort of molecular environment is conducive to successful and complete limb regeneration.

Can regeneration research do anything for medicine?

"It's possible," says Dr. Schmidt cautiously, "that the treatment of cancer could benefit from this research."

How? He explains that cancer, a noncontrolled cell growth or abnormality, becomes a dominating factor in a specific area and that the regeneration progression is "like a cancer tumor or invasive carcinoma because you have masses of tissue growing outrageously and far exceeding normal population."

The difference in regeneration, he says, is that the cell growth here, though in early phases forming extensive indifferent-appearing masses, "doesn't go wild and consequently becomes recognizable and useful."

Dr. Schmidt does emphasize

that limb regeneration as projected for man is just a possibility at this time. The research is complex and doesn't often, if ever, produce instantaneous results.

In fact, it's often years before a principle is applied successfully to other organisms. "I think one of our problems is that there is such a time lag between discovery and application," Dr. Schmidt says.

Even with the time element, research in limb regeneration doesn't slow down. Dr. Schmidt says there's always a new area to explore because "we're by no means short on ideas or projects."

Establish Keeshin Biomedical Systems Planning Center

A new planning center to study health issues of world-wide concern has been established by a $1 million gift from Mr. and Mrs. John L. Keeshin to Rush University.

Mr. Keeshin is Founder, President and Director of Keeshin Enterprises and a pioneer in modern transportation systems. He has served the nation in many capacities and was appointed to undertake special assignments by President Franklin D. Roosevelt before and during World War II. Philanthropy by the Keeshins and by the John L. and Beatrice Keeshin Foundation has benefited a wide variety of institutions in religious, educational, health and welfare fields.

Edward McCormick Blair, chairman of the Trustees of the Medical Center, said the Keeshin gift "sets in motion in a long-range plan to bring the right people together to work on the most promising agendas for the future of all of our citizens—and indeed for the people of the world."

The gift consists of a 40-acre tract of family property including living and conference facilities in Vilas County in northern Wisconsin. The facility there will be known as the John L. and Beatrice Keeshin International Biomedical Systems Planning Center of Rush University.

"As one of the nation's new universities devoted wholly to training and educating physicians, nurses, related health professionals and scientists for the health field," said James A. Campbell, M.D., president of the Medical Center, "Rush University must address the complex social, political, economic and cultural issues bearing on the provision of health care. The Keeshins have provided us with an exceptional opportunity to make significant advances and to chart directions in dealing with these issues."

Among the many ties between the Keeshin family and Rush-Presbyterian-St. Luke's Medical Center is the personal friendship between the Keeshins and William F. Hejna, M.D., a senior vice president of the Medical Center. Dr. Hejna is an orthopedic surgeon who previously served as Dean of Rush Medical College, the first of the three colleges of Rush University to be established.

"Mr. Keeshin has played important roles in our national as well as in our community life," Dr. Hejna said. "In many varied situations in his career, he has seen the power of ideas of talented men and women to shape the future. It is particularly gratifying to note that this latest instance of his insight and philanthropy has focused on a concept with beneficial international consequences yet is fittingly based in the West Side of Chicago where he was born and raised.

"There is no fundamental conflict between scholarly thought and pragmatic application of knowledge," Dr. Hejna said. "What is needed is a system that will assure the discovery, integration and application of knowledge as a process to avoid fragmentation of energies and talents. The Medical Center is committed to systems planning, and Mr. Keeshin's gift enables us to extend this commitment for its broadest application, the health of society."

Dr. Hejna announced that, in recognition of the Keeshins' philanthropy to the Medical Center, the Gait Laboratory of the Department of Orthopedic Surgery will be named in their honor. The Laboratory is one of the nation's few sophisticated resources for research into walking motions of the human body and has been a resource for scientific investigations into artificial joints of the hip, knee and ankle, among its many projects.

(Left to right) John L. Keeshin, James A. Campbell, M.D., Beatrice Keeshin, William F. Hejna, M.D.

Alumni Bulletin

1978 COMMENCEMENT PLANS ANNOUNCED

Plans for alumni involvement in the fourth Commencement of Rush University have been announced. The Friday, June 9, Alumni Commencement Banquet will feature increased activity for anniversary classes of Rush Medical College. In addition to the traditional celebration for the 50-Year Class (RMC '28), the Rush Classes of 1933, 1938, and 1973 will be invited to celebrations of their respective anniversaries.

On June 9 the Annual Meeting of the Rush Medical College Alumni Association will be held at noon at the Medical Center, followed by a special Alumni Symposium and tours of Rush.

Saturday, June 10, will mark the Commencement of Rush University, including that of the Rush Medical College Class of 1978. All alumni will be invited; and 50-year alumni will be invited to join the Commencement academic procession.

ALUMNI REGIONAL RECEPTIONS PLANNED

If you are planning to attend either of the following medical meetings, you may want to mark your calendar for the reception being held for alumni of Rush Medical College and Presbyterian-St. Luke's Hospital. Details will be forthcoming.

We would very much like to have you join us.

American College of Cardiology
Reception on Monday evening,
March 6, 1978
Anaheim, California

American College of Physicians
Reception on Tuesday evening,
April 18, 1978
Boston, Massachusetts

ON THE LIGHTER SIDE

Benjamin Rush Society member Francis H. Straus, M.D., informs us about a recent discovery of an interesting new property of his Benjamin Rush commemorative globe.

"As I was passing close to my desk," writes Dr. Straus, "I noted smoke arising from some papers upon the desk. By the time I reached the desk, a small fire had started in the papers. Resting upon the papers as a paper weight was the plastic globe containing the [Benjamin Rush Society] medallion. Bright sunlight was focused through the globe upon the papers and had started the small fire. This was easily extinguished. Subsequent experiments showed the spherical plastic globe acted as a most competent magnifying lense. When placed in direct sunlight, even behind a window, it generated a hot spot sufficient to ignite wood or paper."

Although the Chicago Fire is part of the history of Rush, we do not wish to repeat ourselves. Present and future members of the Benjamin Rush Society please take note.

DATES FOR YOUR CALENDAR

Friday, June 9, 1978:

12 noon-Alumni Association Annual Meeting
afternoon-Alumni Symposium and Tours
6:30 p.m.-Commencement Banquet

Saturday, June 10, 1978:

2:00 p.m.-Rush Commencement

ALUMNI HOLD DALLAS RECEPTION

Over sixty former and present surgical staff members and residents of Presbyterian-St. Luke's Hospital and surgeons who graduated from Rush Medical College gathered on October 17, 1977, at the Sheraton-Dallas Hotel for an alumni cocktail reception in connection with the annual Clinical Congress of the American College of Surgeons.

Frederic A. de Peyster, M.D., member of the Alumni Association Executive Council and a senior attending physician at Rush-Presbyterian-St. Luke's Medical Center, hosted the reception. Dr. de Peyster mentioned the "new tradition" of these alumni A.C.S. receptions and announced similar plans for next October's Clinical Congress in San Francisco and in Chicago for October, 1979.

ALUMNI NEWS BRIEFS

Clifford E. Smith, M.D. (RMC'10), was featured in the DeKalb, Illinois *Chronicle,* together with his son Robb and grandson Christopher, who are also physicians. Proud of the family tradition, Dr. Clifford Smith, now 93, still keeps regular morning office hours, even though he is now confined to a wheelchair because of arthritis.

Lurrine Miles, M.D. (RMC '15), was featured in the Salt Lake *Tribune* recently. After graduating from Rush and specializing in obstetrics and gynecology, she returned to the town of Roosevelt in her native Utah, where during her career she said she "must have delivered four-fifths of the Unitah Basin." Dr. Miles has since retired to Salt Lake City.

Samuel L. Perzik, M.D. (RMC '26), Associate Professor of Surgery at Loma Linda University School of Medicine and chairman of the department of head and neck surgery at Cedars-Sinai Med-

Alumni Bulletin

ical Center in Los Angeles, recently published *Surgery in Thyroid Disease–The Place of Total Thyroidectomy* (Stratton Intercontinental Medical Book Corp.: New York, 1976).

Eugene Ziskind, M.D. (RMC '26), was made an honorary Fellow of the Royal Society of Psychiatry in London. Dr. Ziskind and his wife, Esther Somerfeld Ziskind, M.D. (RMC '26), live in Los Angeles and are members of the Benjamin Rush Society.

James W. Shaw, M.D. (RMC '27), has retired after 50 years of general practice in Wichita, Kansas. Dr. and Mrs. Shaw attended last year's 50-year class reunion at Rush. Their two sons, Richard and James, Jr., are now practicing physicians in Kansas.

Leonidas H. Berry, M.D. (RMC '30), has received the prestigious Schindler Award of the American Society for Gastrointestinal Endoscopy. Dr. Berry, who served for many years at Cook County and Provident Hospitals, received the award in Toronto, Canada, at the society's annual Digestive Disease Week conference.

Hugh A. Edmonson, M.D. (RMC '31), recently received an honorary doctoral degree from the University of Southern California School of Medicine for his 40 years of service there. Dr. Edmonson is currently an emeritus professor of pathology.

Donald J. Sabath, M.D. (RMC '31), has been named medical director of the medical and dental staff at St. Anthony Hospital in Chicago. Dr. Sabath completed his graduate medical education at St. Anthony and Cook County Hospitals in obstetrics and gynecology. He has also served on the Chicago Board of Health.

Nathaniel E. Reich, M.D. (RMC '32), with his recent lectures on cardiology at universities in Australia and New Zealand, has now lectured on all six continents.

Kate H. Kohn, M.D. (RMC '35), received the annual Chicago YWCA Achievement Award for her work in rehabilitative medicine and her leadership in the prevention of heart disease. Dr. Kohn is chairman of the Department of Rehabilitative Medicine at Michael Reese Hospital and Medical Center.

Joseph D. Romino, M.D. (RMC '36), has been elected president of the Board of Directors of the Marion County, West Virginia, Medical Society. A native of Fairmont, West Virginia, he has practiced medicine and surgery there since his graduate medical education in Chicago and Detroit. Dr. Romino is also a member of the International College of Surgeons and the American Board of Abdominal Surgeons.

Arthur Robinson, M.D. (RMC '38), chief of professional services at the National Jewish Hospital and Research Center, and professor of biophysics and genetics at the University of Colorado Medical Center, discussed the topic "Genetics and Society" in a recent Congress on Science and Ethics in Denver.

Henry S. Kaplan, M.D. (RMC '40), is directing a new research program in Hodgkins disease and other malignant lymphomas at the new Louis B. Mayer Cancer Biology Laboratory at Stanford University School of Medicine. Dr. Kaplan is the Maureen Lyles D'Ambrogio Professor of Radiology at Stanford.

Mary C. Tobin Bleck, M.D. (RMC '77), and her husband Thomas P. Bleck, M.D., began their resident programs at the Medical Center after their marriage this past summer. Mary Tobin Bleck is the granddaughter of the late John R. Tobin, Jr., M.D. (RMC '42), and the niece of James W. Tobin, M.D. (RMC '34), and the late Paul G. Tobin, M.D. (RMC '34).

In Memoriam:

Sylvio A. Sciarretta, M.D.

Sylvio A. Sciarretta, M.D., 87, died October 27, 1977, in Chicago. A graduate of Loyola University School of Medicine and a specialist in otolaryngology and bronchoesophagology, Dr. Sciarretta served in the former St. Luke's Hospital from 1930 until 1950, at which time he became an emeritus member of that staff. From 1959 to 1971 he served on the consulting staff of Presbyterian-St. Luke's Hospital, after which he became an emeritus staff member.

He is survived by his wife, Esther, and a brother. Dr. Sciarretta was buried in his native Termoli, Italy.

Virgil S. Counseller, M.D.

Virgil S. Counseller, M.D., 84, died October 26, 1977, in Scottsdale, Arizona. Dr. Counseller, who graduated from Rush Medical College in 1920, went on to become one of the Mayo Clinic's most distinguished surgeons. After three years as an instructor of surgery at the University of Illinois, he began a fellowship in surgery at the Mayo Clinic and received a Master's Degree in surgery from the University of Minnesota in 1927. At the same time, he became first surgical assistant to Dr. William J. Mayo. He was one of only two surgeons in the United States to have been board certified in three separate fields: general surgery, gynecology and urology.

After performing some 50,000 operations and writing over 300 professional articles, Dr. Counseller "retired" with his wife, Gladys, to Scottsdale, Arizona, in 1957. What followed was fifteen years of active practice and consulting in gynecology. Dr. Counseller also then began work on his autobiography, *The Sculptors of Life,* in which he expressed the humanitarian goals of the surgeon and the doctor-patient relationship.

Dr. Counseller a native of Elida, Ohio, is survived by his wife, Gladys, and their four children, Virginia, Cynthia, David, and Pamela.

Alumni Bulletin

Clark W. Finnerud, M.D.

Clark W. Finnerud, M.D., 82, died October 10, 1977, in Minocqua, Wisconsin. A 1918 graduate of Rush Medical College, Dr. Finnerud served his internship at Presbyterian Hospital and did postgraduate work in Paris and London. He held faculty appointments at Rush Medical College (1919-1942) and the University of Illinois Medical School (1942-68) and was on the emeritus staff of both Colleges at the time of his death.

Dr. Finnerud served as president of the American Dermatological Association (1957-58), and the Chicago Dermatology Society (1926), and served as vice president of the Society for Investigative Dermatology (1941-42). He was a charter member and a diplomate of the American Board of Dermatology and Syphilology. Dr. Finnerud had co-authored several books and texts on dermatological diseases.

A native of Watertown, South Dakota, he is survived by his wife, Gertrude Delight Putnam; a sister Florence F. Sweeney; and two daughters, Mrs. Ann F. Moyer and Mrs. Mary F. Lewis; and six grandchildren.

Deceased Alumni: 1976-77

Louis W. Allard, '42
George C. Allen, '33
Glenn Ashworth, '37
Loren W. Avery, '20
Jacob A. Bargen, '22
Hugo C. Baum, '36
C. Earl Baumle, '29
Raiford D. Baxley, '40
Donald Boersma, '38
William F. Brinkman, '14
Julian M. Bruner, '27
Edmund J. Burke, '13
Clarence G. Clippert, '24
Frank H. Comstock, '27
Virgil S. Counseller, '20
Manuel A. Davidoff, '37
Helen C. Davis
James R. Doty, '26
Lester R. Dragstedt, '21
John S. Duncan, '27
Charles L. Dunham, '34
Lindsay J. Ervin, '37
Clark W. Finnerud, '18
Morris Fishbein, '12
Paul Forgrave, '11
Harry T. French, '22
Thomas C. Galloway, '12
Samuel Garrick, '37
Fred L. Glascock, '16
Theodore H. Goldman, '29
Morris A. Granoff
Earle Hallock, '16
Kathleen R. Harrington, '17
Charles O. Harris, '29
Robert H. Henderson, '15
Donald K. Hibbs, '27
Clayton F. Hogeboom, '29
Blair Holcomb, '20
Alice M. Hunter, '20
John R. Irwin, '42
Arthur L. Langhorst, '15
S. Robert Lantiere, '34
Frank B. Leffert, '22
Rudolph P. Leyers, '34
Orren Lloyd-Jones, '28
N. Alexander Lichtor, '42
John H. Linson, '12
Albert G. Martin, '35
Arleen Levin Massey, PSLH '76
J. Winford Mather, '36
Carl L. Mauser, '36
Owen G. McDonald, '39
Lester S. McLean, '37
Claude W. Mitchell, '16
Holger S. Mouritsen, '42
Edward L. Murphy, '35
John R. Newman, '12
Byron Nixon, '22
Harry A. Oberhelman, '21
Marie Ortmayer, '17
Rudolph Osgood, '32
Marvin B. Padnick
James Patterson, '11
Melvin B. Peterson, '22
Henry R. Powers, '18
William E. Prescott, Jr., '28
George J. Rakstinat
J. Stanley Reifsneider, '28
Bernhard R. Reinertsen, '20
Heyworth N. Sanford, '25
Milton H. Sax, '37
Walter A. Schimmel, '36
Sylvio A. Sciarretta, PSLH '71
Maurice H. Seevers, '32
Herbert A. Sheen, '30
Mandel Sherman, '21
William D. Sicher, '40
Leonard R. Sillman, '37
Margaret G. Smythe, '26
Fred L. Soper, '18
Harry T. Southworth, '33
Paul G. Spelbring, '27
William L. Spencer, '27
Carl Steckler, '34
Wilson Stegeman, '25
Irving F. Stein, '12
George B. Stericker, '27
John T. Strawn, '09
Edward J. Strick, '11
Howard B. Thomas, '40
Howard V. Valentine, '35
Willard L. Veirs, '21
Ernest S. Watson, '28
Manuel R. Wexler, '37
Eugene G. Whitaker, '41
Walter N. Wiborg, '34

LET US KNOW . . .

. . . about you. News about our alumni comes to us from various sources: newspaper articles, friends, and various journals. However, to develop our ongoing section of news about our alumni we need your help. We would appreciate your sending us any newsworthy information about your professional activities or personal interests. Don't be overly modest—we know that alumni like to hear about each other's activities. Please send all items by postcard or letter to:

Alumni News
Alumni Association Office
Rush-Presbyterian-St. Luke's Medical Center
1725 West Harrison Street
Chicago, Illinois 60612

The Magazine, incorporating the Bulletin of the Alumni Association of Rush Medical College, is a publication of the Office of Philanthropy and Communication, Rush-Presbyterian-St. Luke's Medical Center.

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The Magazine
Rush-Presbyterian-St. Luke's Medical Center
1753 West Congress Parkway
Chicago, Illinois 60612

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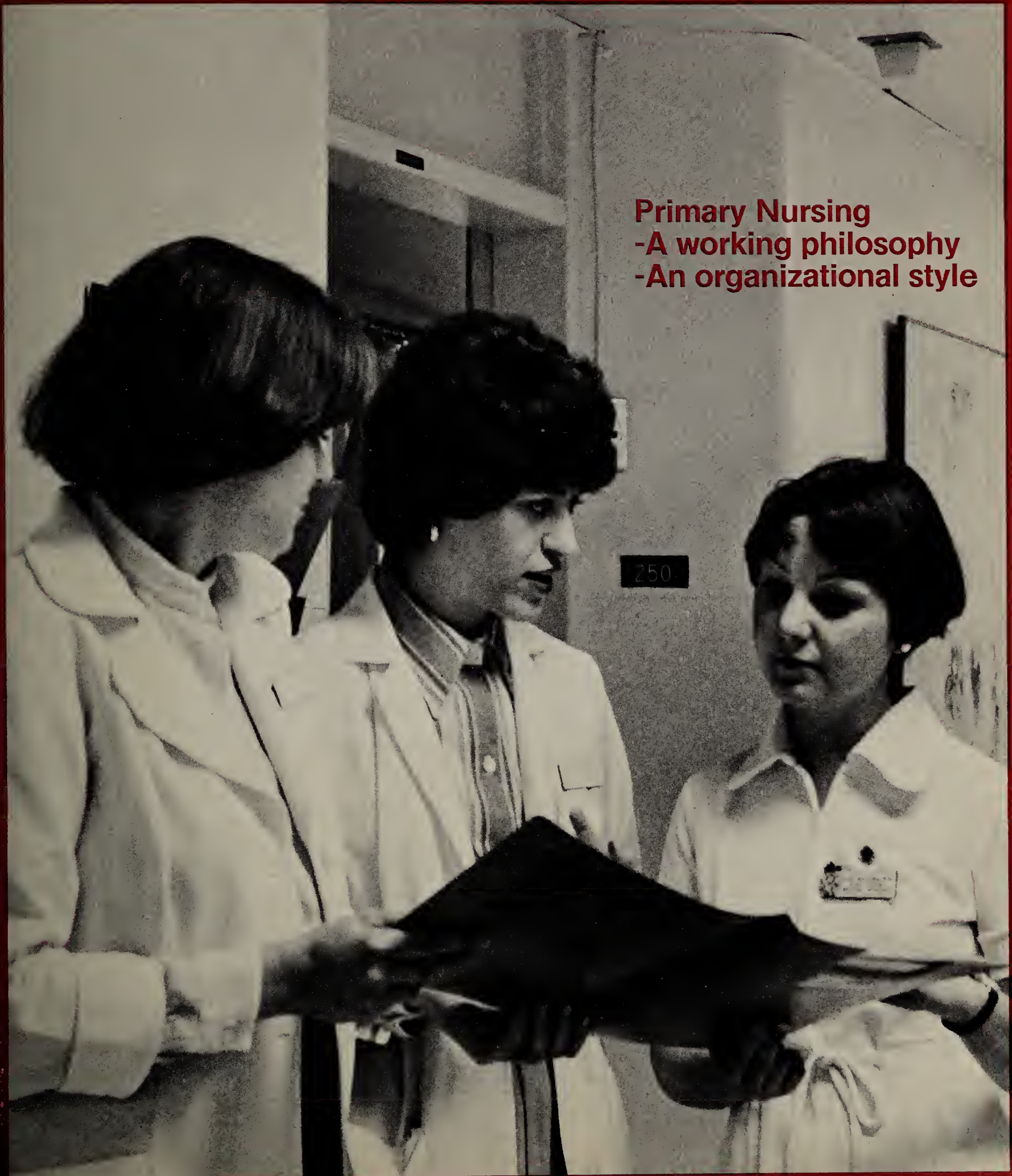

Primary Nursing
-A working philosophy
-An organizational style

SPRING 1978

The Magazine

of Rush-Presbyterian-St. Luke's Medical Center
volume 2, number 2, spring 1978

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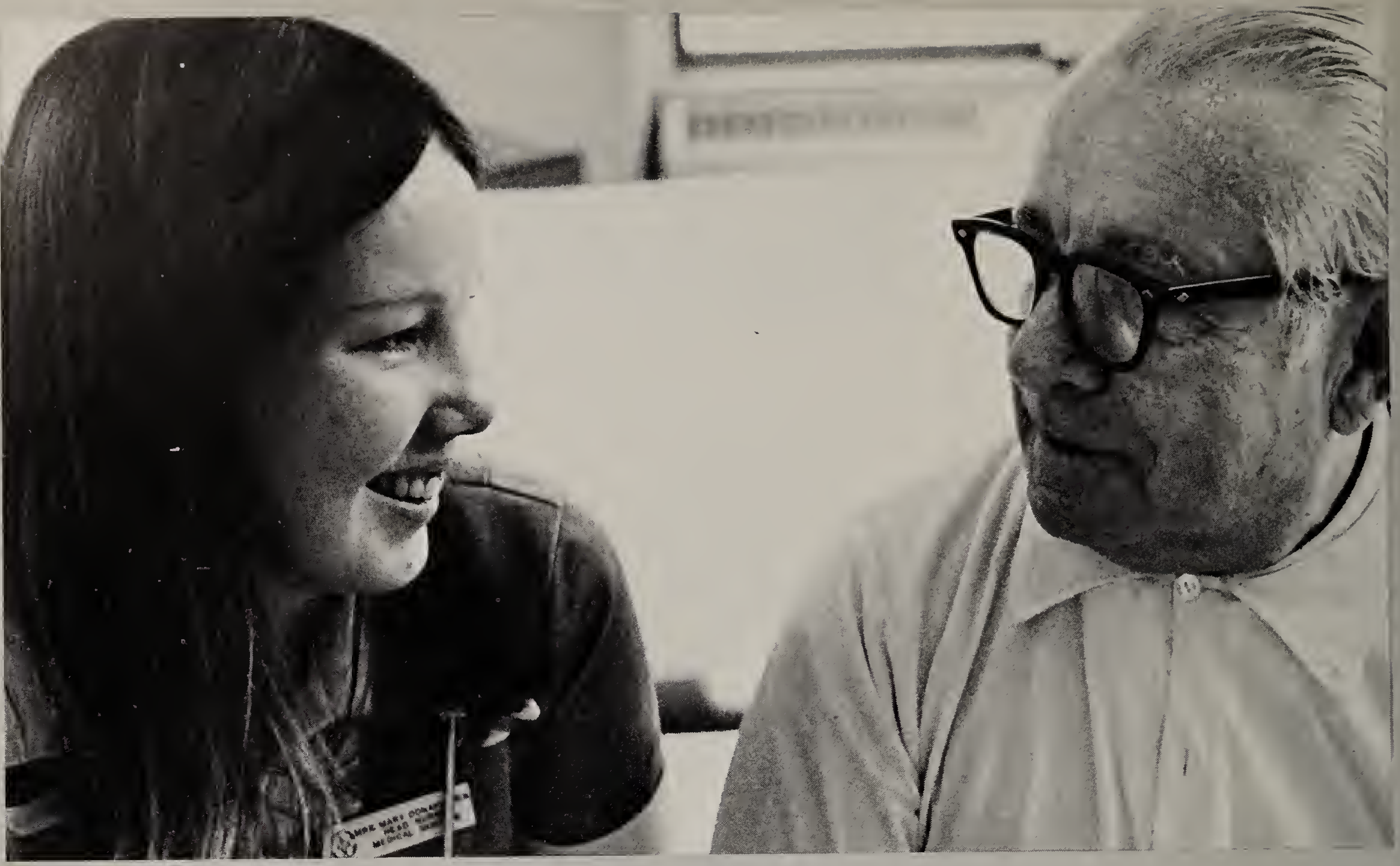


Primary nursing gives Mary Donahue, R.N., opportunity to use all her education and skills on behalf of patients and families.

Since we started primary nursing, our patients have taught us much about ourselves and the hospital system we have created.

Several years ago, one man, dressed in a hospital robe, walked to 3 Jones to look for Mary Donahue, his primary nurse during his previous hospitalization. This time he was hospitalized on a unit of the hospital that had not yet instituted primary nursing, and when he found Mary he told her: "You know, I'm on that specialty floor now. There's a special person to take my temperature, somebody else gives me a bath, somebody else takes my blood pressure, another specialist gives me my medicine, but there's nobody to tie my shoes! Will you please tie my shoes?" This unfortunate man was caught in what has been called "functional nursing," in which staff are assigned to a set of tasks instead of taking responsibility for total nursing care of patients. Primary nursing provides one nurse to give nursing care day after day—even tying shoes if the patient is unable to do so himself.

Another patient showed us that primary nursing is not forgotten when the discharge order is written. She was an elderly woman, stooping over her cane, and walking very briskly down the corridor of 10 East Pavilion. Ellen Elpern and I were standing in the hallway, but the woman's intense eyes were fixed only on the doorway beside us. She went straight into the room, but found no one there. She then turned to us and asked anxiously, "Where's Jacci?" Ellen helped the lady to a chair and went to find Jacci Brophy, the patient's primary nurse on her last admission to 10 East. We soon learned that the woman came to see Jacci to let her know that she had kept her appointment to return for therapy. That seemed simple enough, but the story turned out to be not so simple for the woman.

When she was discharged from the hospital, the staff had carefully instructed her about her home care and the date to return to the hospital for therapy. She lived alone in a distant suburb and came to the hospital via rather circuitous bus routes. When Jacci learned that she had missed two appointments for therapy, she asked her former patient why she had not kept the appointments. The patient explained to Jacci that she found the hospital both times, but when she arrived in the lobby and found "so many people and so many hallways," she just gave up and went back home. She did not know where to find the right department and did not want to ask. Jacci arranged to meet the woman at the front door of the hospital and took her to her next appointment. Their relationship continues.

These are the kind of events that have touched our hearts and "made our day" as we have begun primary nursing. Though the system is not perfect, we are certain that it allows us to provide better nursing care. It also gives a patient and family another resource when help is needed.

Sue Hegyvary, Ph.D., R.N.
Assistant Vice President for
Nursing and Associate Dean,
College of Nursing

Primary Nursing:

·A working philosophy
·An organizational style

by Regina Pryma

Joseph Blake, 65 years old, has just been admitted to Presbyterian-St. Luke's Hospital. He has been experiencing shortness of breath and a tightening feeling in his chest. His physician suspects that Mr. Blake may be suffering from heart disease. He is entering the hospital for testing to determine whether his condition can be treated medically or if surgery is required.

Mrs. Blake is with her husband. Both are apprehensive as they enter the corridor of 3 Jones, the medical unit where Mr. Blake will "live" while undergoing tests. The large hospital seems filled with strangers and many unknowns. When the Blakes enter his room, a young woman standing by the bed looks up from her notebook, smiles, and says, "Hello Mr. Blake... I'm Mary Ann Colletti, your nurse."

For the next half-hour Mary Ann talks with the Blakes and begins to ease the apprehensions that they felt just moments ago. She has consulted Mr. Blake's physician, is familiar with his condition, and knows which tests have been ordered for him. Now she wants to find out more about Mr. Blake, the person. She talks to him about his physical complaints. She asks about his daily routine: What are his daily activities? What kinds of foods does he like? When and how long does he sleep? Has he been hospitalized before?

There are questions for Mrs. Blake, too: How will she get to and from the Medical Center? Will their children be visiting often? How long will visits last?

Mary Ann encourages the Blakes to ask questions. They are concerned about the test schedule: How long will each test take? Will they be painful? How will the results help his doctor in deciding what should be done? Mary Ann answers each question. She assures Mr. Blake that she will spend as much time as she can with him on the test days, will explain each procedure and describe the sensations he will feel, and will discuss his care and treatment with his physician.

Before she leaves, Mary Ann encourages Mr. and Mrs. Blake to write down any additional questions for herself or the doctor. She also leaves a telephone number so Mrs. Blake can call her with questions about her husband's condition.

After Mary Ann has gone, Mrs. Blake helps her husband settle into his room. They are much more at ease now, confident that Mary Ann will be a big help to them in the days ahead. Mary Ann's professionalism and knowledge have reassured Mr. Blake that he can depend on someone he knows for information and comfort.

The time that Mary Ann has spent with the Blakes has calmed many of their fears about hospitalization. But the interview has done more than that. It has helped Mary Ann to understand Mr. Blake as a person as well as a patient. This is crucial because starting from the moment of his admission, the round-the-clock nursing care Mr. Blake will receive is Mary Ann's responsibility ...she is his primary nurse.

Primary nursing is a working philosophy adopted at Rush-Presbyterian-St. Luke's Medical Center in 1972 that puts each individual patient under the continuous guidance of one nurse from admission to discharge. Its goal is patient-centered care, a

goal that may seem obvious, but which is easily hampered by the difficulty of coordinating large numbers of health care workers. Primary nursing offers a solution to such organizational difficulties encountered in complex settings.

Primary nursing as practiced at the Medical Center is an innovative approach to patient care. But the concept is not entirely new. Like other professions, nursing has undergone many changes since the turn of the century, and the current approaches have grown out of the successes and failures of the past.

One of the major changes in nursing care since the early 1900s is the setting in which it is delivered. Before World War I, most patients were treated in their homes. Nurses worked around the clock, living in patients' homes. Besides nursing their patients, they were also expected to assume household duties. While private duty nurses gave intense individualized attention to patients' needs, they were not fully prepared to meet the many physical and psychological needs of their patients.

After World War I, patients were treated more often in hospitals than at home, and this change in the care environment called for a more efficient organizational structure to provide nursing care. Instead of working on a one-to-one basis in the patients' homes, each nurse became part of a group of nurses responsible for the care of many patients.

"Functional nursing" evolved as a way to care for large numbers

Julie Cannon, R.N., assists one of her primary patients as he walks down the corridor.

> *"Now that the nurse is back at the patient's bedside, it is a rare patient who complains about care, and hardly a day passes when a patient doesn't comment on how excellent the nurses are."*
> *—Milton Weinberg, Jr., M.D.*

---

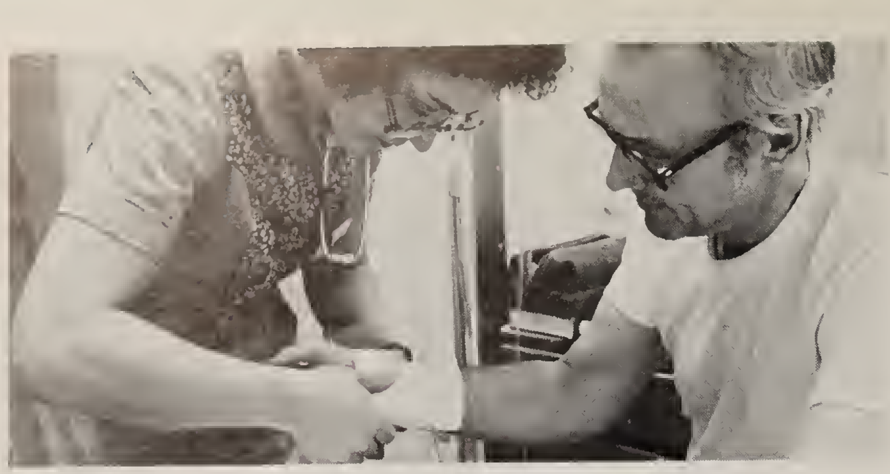
of patients at once. This is a task-oriented approach in which each nurse has a specific duty—such as taking temperatures or distributing medications. Following World War II, an increase in the number of health care workers involved with each patient further fragmented nursing resources.

One of the most common current approaches to patient care is "team nursing." Its philosophy is to utilize the capabilities of each member of the team including nurses, orderlies, aides, *et.al*. The team leader is expected to be an expert in clinical nursing and to know and apply the principles of administration, guidance, and teaching in her work with her team. Team leaders may find the demands of managing groups of patients and staff overwhelming, and often are not equipped with the skills necessary to be both good clinical managers and effective administrators.

While the team nursing approach is designed to provide good patient care, it does not provide an alternative to the task-oriented approach. Well-educated nurses still find themselves *only* taking temperatures or *only* distributing medications. When team assignments vary from day to day, patients see many different nurses and support personnel, and continuity of care is disrupted.

Primary nursing is designed to provide the continuity and individual attention that is often lacking in functional or team nursing. Nursing responsibility and accountability is established for each patient. Sue T. Hegyvary,

Debbie Haskins, R.N., cares for one of her young patients in the Pediatric Unit.



Shirley Gibson, L.P.N., adjusts the bed for a patient.

Ph.D., R.N., Assistant Vice President for Nursing and Associate Dean, College of Nursing, describes the role of the primary nurse as one who assesses the patient's needs for nursing care, collaborates with other health workers in providing daily continuity and coordination of care, plays the vital role of "patient advocate," and evaluates the patient's response to care. The primary nurse is responsible for the total nursing process for the patient during his period of hospitalization.

This means that the primary nurse not only directs the nursing care of the patient, she also gives the "hands on" care that the patient receives—she takes his temperature and blood pressure, administers medication (and explains what it is for), gives bed baths, changes surgical dressings, and performs many other activities involved in nursing care. The primary nurse explains the testing procedures and encourages questions. Sometimes she accompanies her patients to tests.

The amount and type of "hands on" care will, of course, vary from patient to patient, depending on the nature of the illness. Not every patient will require intravenous therapy or oxygen, for instance, but the primary nurse is prepared to handle such procedures whenever necessary. It is not uncommon for a nurse to take walks with her patients, comb her patient's hair, or read to them.

At change of shift, Mary Ann Faitz, R.N. (right), gives report on her primary patients to Gay Hall, R.N., who will function as the associate.

> *"While the concepts of continuity and a one-to-one nurse-patient relationship build on the past, the expression of primary nursing as a philosophy and an organizational style is a relatively recent innovation."*
> *—Sue Hegyvary, Ph.D., R.N.*

Sue T. Hegyvary, Ph.D., R.N., (right), and Ellen Elpern, M.S.N., review a nursing care plan.

"This style is reminiscent of the early 1900s when the nurse managed all the patient's nursing care," says Dr. Hegyvary. "It is not merely old wine in new bottles, however, since there have been numerous changes, particularly in the scope of nursing practice and in the setting in which care is delivered. So, while the concepts of continuity and a one-to-one nurse-patient relationship build on the past, the expression of primary nursing as a philosophy and an organizational style is a relatively recent innovation."

Recognizing that primary nursing provided an alternative to the functional and team approaches —an alternative that would allow full utilization of the resources and potential of both nursing and support personnel—the Medical Center decided to implement it on a trial basis. In 1973, under the direction of Luther P. Christman, Ph.D., R.N., Vice President, Nursing Affairs and Dean, College of Nursing, two medical and two surgical units of Presbyterian-St. Luke's Hospital began restructuring their organization for primary nursing. Very quickly it was apparent that the new system was working, and today every unit of the hospital employs the primary nursing philosophy in varying degrees.

"Once the system was implemented and we developed measures of quality of nursing care, we were able to measure the results directly through quality assurance guidelines, which monitor the success of nursing care delivery,"says Dr. Christman. "Secondly, the results were measurable through patients' responses, evidenced in the increased flow of laudatory letters about the quality of care. Physician responses were very good; they found their patients were well cared for and more cooperative. And nurses themselves were enthusiastic about the system; they found it more challenging and were pleased with the new level of involvement they had with patients. They were able to use *all* the knowledge they gained in school, not just fragments."

Three Jones, where Mr. Blake was hospitalized, was one of the first units to try primary nursing. It is a medical unit where patient problems are varied, and nurses must care for both acutely ill patients and those whose needs are less intensive. The unit accommodates 38 patients, and is usually filled to capacity. There are 25 registered nurses in this unit, a big change from the days before primary nursing was adopted, when the average number of R.N.s was six. There are 11 L.P.N.s in the unit and, at most times, students from the College of Nursing for several hours a week. Each registered nurse in the unit is assigned primary patients. This means that when a patient is admitted, the primary nurse has 24-hour, seven-day-a-week nursing care responsibility.

Of course, the primary nurse cannot be with a patient 24 hours a day and, due to the rotation of nursing assignments, may be off for several days during the patient's hospitalization. She does, however, provide the overall direction of the patient's nursing care and works with members of the staff to see that the appropriate care is given when she is not on duty. On 3 Jones, as in most units of the hospital, the staffing is organized to allow the primary nursing concept to work.

The unit is divided into four modules, each with a leader re-

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The "Family's" Nurse

There are smiles everywhere on the seventh floor of Presbyterian-St. Luke's Hospital—on new mothers, proud fathers, happy grandparents, excited brothers and sisters. It is, of course, the maternity floor, where the Family-Centered Care Unit is located.

Several years back, as at most other hospitals, things were different. Mothers and babies were separated shortly after birth, Babies went to the nursery; mothers went to their rooms and saw their babies only at scheduled times of the day, usually only for feeding. Occasionally, they could walk down the hall to peer into the nursery, waiting until the nurse announced, "Mothers,here come your babies."

Fathers were outsiders then. Visiting privileges were limited to only a few hours a day. If the father worked an evening shift, or was unable to be at the hospital during visiting hours, he might not see his baby at all.

There were other problems. Mothers and fathers got little or no instruction on how to care for their infant at home. Different nurses cared for mothers and their babies; mothers couldn't ask their own nurses such things as how their baby was sleeping or if he was crying very much.

In 1975, a committee of maternity nurses at Presbyterian-St. Luke's got together to talk about the state of obstetrical nursing practice and needs for growth. Their recommendations were implemented by the Department of Obstetrical and Gynecological Nursing and included utilization of primary nursing, which gave mother and child the same primary nurse. Other changes included a rooming-in option that put the baby at the mother's bedside for most of the day, extended visiting hours for fathers, visiting privileges for siblings of newborns, and an active program of instruction for mothers *and* fathers.

"All these changes enable us to live up to our name—Family-Centered Care Unit," says Carol Olson, R.N., Head Nurse on the FCCU. "After all, a child is not born to the mother only, but into a family. We try to gear the hospital experience toward the family."

Giving newborns to their mothers immediately after birth and allowing them to make physical and eye contact provides maternal-infant bonding. "Since the first few days after birth are

Increased visiting hours and rooming-in involves fathers in the bonding process.

so crucial to bonding, we encourage this process by allowing babies in the mother's room for as much of the day as possible and as the mother's health permits," says Myra Ringuette, M.S.N., Acting Associate Chairperson in the Department of Obstetrical and Gynecological Nursing. Increased visiting privileges and rooming-in involves fathers in the bonding process as well and brings them into closer contact with their children.

Sibling visitation privileges enhance the family-oriented nature of the unit: having a new baby affects children in a family as well as parents, and being separated from their mother can be unsettling for them.

"Letting the brothers and sisters join in the experience of the first few days reduces their fears about their mother's well-being and makes them feel a part of the family experience," says Ms. Olson. "We try to encourage this feeling by letting the little ones come and see that their mother is fine, and even look into the nursery at their new baby." A lounge area directly adjacent to the FCCU is reserved for visits by children.

Primary nursing has made these changes possible. It puts the care of the patient under the direct supervision of one nurse and eliminates fragmentation of care. Primary nursing on the FCCU is similar to primary nursing in other areas of the hospital, with a twist—the mother's

Inta Pekorek, R.N., talks to a new mother about infant nutrition.

Carol Olson, R.N., hands a yawning newborn to his mother

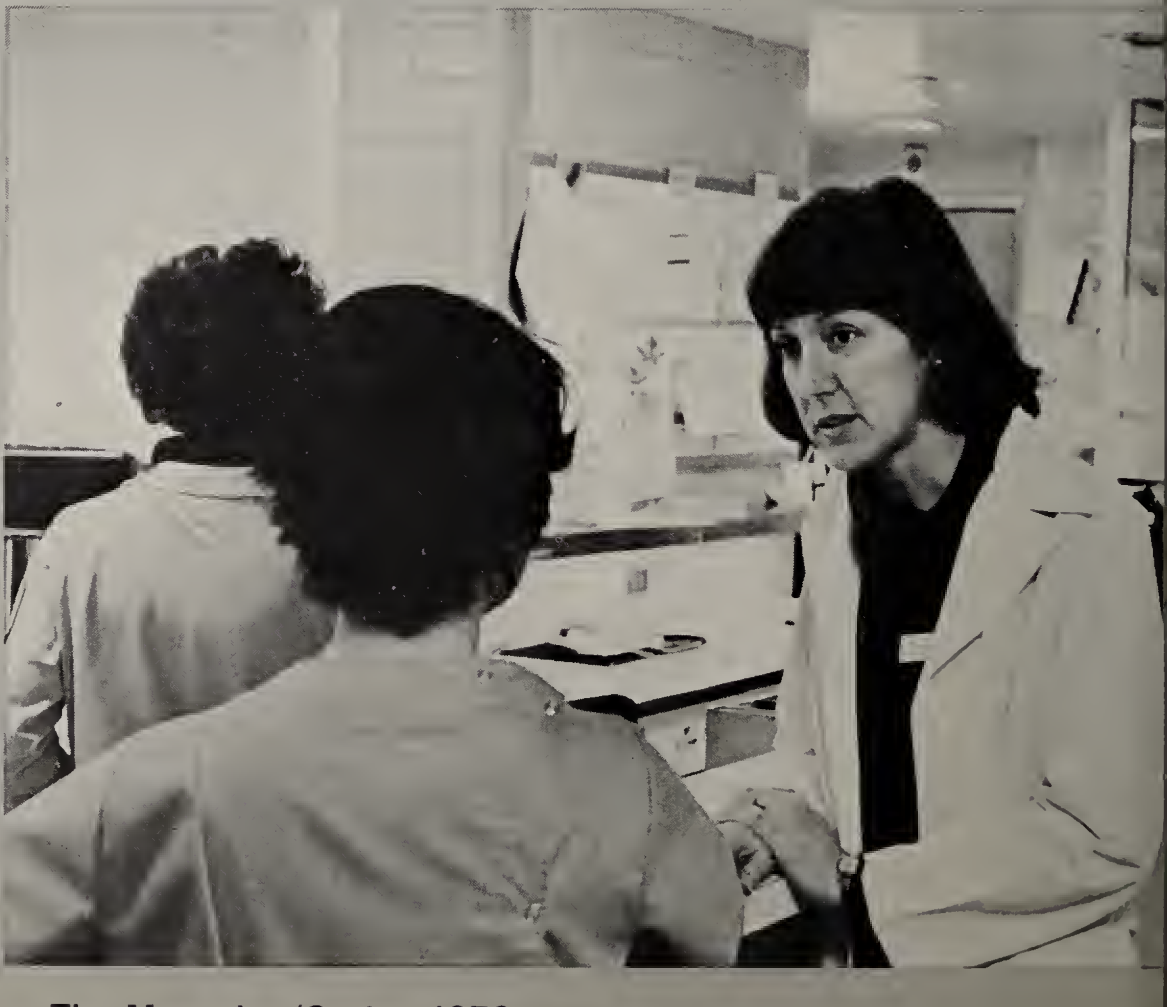
primary nurse is also her baby's primary nurse. When a mother speaks to her nurse, she is now also speaking to her baby's nurse.

"This has meant a great deal to our patients," says Ms. Olson. "The one-to-one relationship between mother and nurse reinforces the family orientation of the unit. Mothers no longer feel isolated from those who are watching over the care of their child."

Nurses are now more actively involved in teaching their patients. "There is so much that the mothers and fathers want to learn," says Ms. Ringuette, "that this is one area where instruction is so important *during* hospitalization." Nurses on the FCCU provide instruction in breast-feeding, bottle-feeding, postpartum exercises, bathing the baby, birth control, and hygiene.

"We also try to educate the parents as to what to expect when they get the baby home," says Gloria Herrera, R.N., Assistant Head Nurse. "Much of what they learn from us is the result of the barrage of questions we get throughout the hospitalization, but it is also important to have some formalized instruction on child development, so that parents don't panic when the baby does something they otherwise might be unprepared for."

One of the biggest advantages to the parents is having the father participate in the instruction; nurses on the unit usually try to arrange instruction sessions when the father can be



Myra Ringuette, M.S.N., Acting Associate Chairperson in the Department of Obstetrical and Gynecological Nursing (right), talks with Connie Arellano, R.N.

there. "Even fathers who have other children get excited about this, because sometimes they were virtually excluded when their other children were born," says Ms. Ringuette.

Teaching mothers and fathers, encouraging bonding between parent and child, and making the birth of the baby a family event—these are the goals of the Family-Centered Care Unit.

Says Ms. Olson, "We're continually working toward making the first few days after birth the wonderful family experience that it should be."

Gloria Herrera, R.N., gives a lesson in bathing the baby.

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sponsible for the coordination of nursing care delivery. The module leader, and each R.N. in the module, has two or three primary patients. When the primary nurse is off duty, an "associate," who may be either an R.N. or L.P.N., provides nursing care for her patients. When she resumes duty, she has responsibility for her own primary patients, and may be an associate for patients on her module whose own primary nurse is not there. Whenever possible, a patient will be cared for by the same associate nurses throughout hospitalization.

The primary nurse's first exposure to her "primary" patient occurs at the time of admission. After being apprised of the patient's condition, the primary nurse conducts an interview with the patient. This is the first step in the nurse-patient relationship that is one of the foundations of primary nursing. During this session, the nurse discusses the patient's physical complaints, the reason for hospitalization, and any special needs the patient may have. She acquaints herself with the total patient so that she can develop a nursing regimen tailored to the needs of that individual and coordinated with the medical care plan.

Mary Donahue, R.N., Head Nurse on 3 Jones, stresses the importance of the initial interview. "One of the most valuable aspects of the primary nurse's initial interaction with her patient is that it immediately introduces the patient to one person—a person who identifies herself as that patient's primary nurse, someone he or she can turn to for help and for answers to questions."

Information the nurse obtains from the patient at the beginning of the hospital stay enables her to formulate a nursing plan that will ease the adjustment to hospitalization—a prime factor in the patient's role as an active member of his treatment team. The more knowledgeable the patient is about his role in his care, the more he will facilitate the roles of various clinicians involved in his treatment. "If the patient is made to feel he is a vital link to care, instead of a passive recipient," says Dr. Christman, "He will become involved in the planning and management of his illness and the specific elements of his care." To succeed as a member of his own treatment team, the patient must be informed about the specific treatments he receives. The primary nurse, then, must help the patient in his adjustment and must teach him about the many aspects of his care. This process begins immediately after admission, when the primary nurse talks to the patient and his family.

The primary nurse often finds on her initial interview that menu planning is a good way to begin the adjustment. When the nurse takes the time to find out the patient's unusual or ethnic preferences, a bridge from his own world to that of the hospital is

Recognizing that immediate family members are important contributors to the patient's well-being, Sue Behrend, R.N., talks with her patient *and* his wife.

> *"If the patient is made to feel he is a vital link to care, instead of a passive recipient, he will become involved in the planning and management of his illness and the specific elements of his care."*
> *—Luther Christman, Ph.D., R.N.*

established. In this activity, which appears at first to be a rather simple one, the nurse may discover special problems in nutrition that need to be referred to the physician and/or a dietician. If diet modification is necessary, the team works with the patient and family to explain the modifications, and help them plan how to make the adjustment at home.

Many patients are apprehensive about the outcome of hospitalization, and their emotional state is one of the most important things a primary nurse must assess. The nursing care plan for each patient contains plans and instructions for the primary and associate nurses and it must include any special care related to the patient's physical and emotional states. For instance, if a patient is extremely concerned about his medication, the primary nurse would note this in the nursing care plan, and might suggest that the associates take time to discuss each dose with the patient.

Instruction is one of the most effective ways to make the patient a participating member of the care team. The primary nurse is both interpreter and teacher. Since most patients are not familiar with much of the medical language they will hear, she explains unfamiliar terms. She determines what special education the patient needs to best assist in the treatment process.

"Sometimes the things we teach are very basic, such as skin care," says Ms. Donahue. "But many patients need sophisticated instruction about preventive measures that need to be taken after discharge from the hospital."

On 3 Jones, many cardiac patients receive instruction through "Cardiac Comeback." This program was developed by two nurses, Karyn Holm and Pam Carlsen. It consists of seven different presentations including slide/tapes and booklets designed to teach the patient more about his disease . . . and how to live with it. The presentations deal with how the heart works, how further heart disease may be prevented, and how medication, activity, nutrition, and stress affect the patient's recovery.

The primary nurse brings the program to the patient's bedside, and the various segments are presented according to the needs of each patient. The nurse reviews and amplifies the information in each presentation and is prepared to answer any questions the patient might have.

"Teaching is expected of all nurses at the Medical Center," says Dr. Christman. "Most primary nurses are very good at determining how much instruction a patient needs." Explaining diagnostic procedures is an important part of the nurse's job. For example, when a primary nurse has a patient who is scheduled for a cardiac catheterization, she will explain why the test is being done, what the test entails, who will be performing the test, and how the patient can expect to feel after the procedure. This information is given to supplement what is

Luther P. Christman, Ph.D., R.N., Vice President, Nursing Affairs, and Dean, College of Nursing.

provided in more technical terms by the patient's physician. Ellen Elpern, M.S.N., Acting Chairperson, Department of Medical Nursing, stresses the importance of this pre-test instruction. "It helps reduce the patient's anxieties by being honest with him about what to expect during the procedure. And by knowing what sensations to expect after a diagnostic procedure, the patient can alert the nurse if something seems unusual." Primary nurses currently receive formal instruction in how to prepare their patients for certain diagnostic procedures.

The primary nurse is also a patient advocate, a liaison between the patient and other professionals involved in treatment and diagnosis of disease. She is a very important constant during the patient's hospitalization—one who is able to explain the various roles of the many physicians, technicians, and support personnel who may treat her patient.

The patient's family is also part of her job. The family is vital to the patient's progress and primary nurses welcome immediate family members as important contributors to the patient's well-being by encouraging them to learn along with the patient. "Getting to know a patient's family helps us to know the patient better," said one primary nurse. "We also try to make sure that the family's fears are discussed, and that they learn how they can help the patient."

Family members are encouraged to call the primary or associate nurse about the patient's condition. "In the old days,

Bette Burton, R.N., helps a patient get ready to take a walk.

The family is vital to the patient's progress and primary nurses welcome immediate family members as important contributors to the patient's well-being.

Mary Donahue, R.N., Head Nurse, reviews a nursing care plan with Leila Brown, R.N. (left), and Bette Burton, R.N.

families were often unable to reach a nurse on the unit who could tell them what the situation was," says Ms. Donahue. "Now we give our name and number—we encourage them to call anytime if they have questions or want to check on the patient's condition. They trust us more when we give them specific information."

Primary nursing has brought greater nursing accountability. Since the primary nurse is given full responsibility for each patient's nursing care, there is a large investment of the nurse's care and interest in that patient. Dr. Christman says, "When a nurse is functioning in a primary nursing structure a number of useful activities are occurring simultaneously. The nurse is assuming total nursing responsibility for the patient. This performance is measurable, and the competency of the nurse is on the line. Continuity of nursing care for the patient is certain, and the outcome of the performance can be evaluated and accountability fixed. Reduction in errors of commission and omission, especially the latter, is made more feasible. Patients have more assurance that their welfare will be guarded, their privacy less invaded, and their advocacy more enhanced."

Greater involvement means that the primary nurse works closely with the patient's physician in every aspect of the patient's care. Physician reaction to primary nursing has been positive. Accord-

Lisa Shannon, R.N., explains a diagnostic procedure to one of her patients.

Leila Brown, R.N., talks with the husband of one of her patients.

ing to Milton Weinberg, Jr., M.D., Department of Cardiovascular and Thoracic Surgery and President of the Medical Staff, "The relationship with the medical staff is infinitely better than it was before primary nursing. Doctors no longer find it difficult to find someone who can answer questions about the care their patients receive. They are assured that one nurse has responsibility for the overall care of the patient and will be able to assess any change in a patient's condition that the physician should be aware of. The old system didn't let the nurses use their knowledge as real professionals. The primary nursing system allows the nurse to practice as a professional with true concern for the patient's well-being."

Primary nursing provides nurses with an opportunity to give their best to patients, to use their scientific knowledge, clinical skills, and personal insights. Most nurses find that primary nursing provides both professional challenge and personal reward. One nurse noted, "I work harder when it's *my* patient. When my patients go home I feel good knowing that I was truly involved in their care."

Primary nursing at the Medical Center has been successful in many ways. Patients at Presbyterian-St. Luke's Hospital receive outstanding nursing care; there is a better working relationship between the medical and nursing staffs; and nurses find that primary nursing enables them to utilize their education to give total care to their patients. "It is the quality of the nursing staff that really determines the patient's feeling about a hospital," Dr. Weinberg added. "After all, even though the patient sees his physician daily, for 23½ hours of the day the patient relies on the nurses. The nursing staff determines the overall mood of the institution. And the improvement in the atmosphere in our hospital is one of the biggest changes that primary nursing has effected. This atmosphere is immensely important because it aids the patient's recovery.

"Five years ago hardly a day went by when during morning rounds at least one patient did not complain about the care he was receiving," says Dr. Weinberg. "This happened because the system didn't really give nurses the chance to provide the care. Now that the nurse is back at the patient's bedside, it is a rare patient who complains about care, and hardly a day passes when a patient doesn't comment on how excellent the nurses are."

Dr. Hegyvary summed up the implications of primary nursing: "Primary nursing is a promising stage of evolution in nursing care organization. It is not perfect—no system is, and we will keep improving it. But based on the history and development of nursing, as well as the studies we and others have done, we think it is the best design we know for providing good nursing care."

Bette Burton, R.N., assists one of her patients in preparing his daily menu.

Leila Brown, R.N., discusses prevention of heart attacks with one of her patients as they watch Cardiac Comeback.

Melodious Torry, L.P.N., accompanies a patient as she is discharged.

An Outside View of Rush Nursing

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by Shirley Fondiller

Primary nursing is but one of the components of the Rush Model for Nursing. Other aspects of this model include nurse accountability, quality assurance, practitioner-teacher programs, levels of practice, home health care, and joint practice.

In the last few years, the success of the Rush nursing model has generated interest by health professionals throughout the country. In November of 1977, Shirley Fondiller of The American Nurse *visited the Medical Center to see Rush nursing in action. She spent several days observing the various nursing settings and levels of practice at Rush, and she talked to nurses about their roles as part of the health care team. Following are excerpts from Ms. Fondiller's article on nursing at Rush, which appears in May, 1978 issue of* The American Nurse.

Creating New Roles

The sense of exhilaration that was beginning to permeate the Rush health care system and the opportunity to develop new roles captured the interest of nurses across the nation.

A new arrival, Penny Cukr, was drawn to Rush because of its "rich practice potential." After coming on board in fall 1976, she began preparing a proposal to develop a primary site for gerontological ambulatory care in an inner city satellite clinic. The project was accepted and funding subsequently made available, and on Jan. 9, 1977, the William B. Jones Senior Citizen Comprehensive Care Clinic officially opened.

Her professional background aptly suits Ms. Cukr for her present practice. A nurse clinician with a master's degree (Wayne State University) in medical-surgical nursing but with "heavy emphasis on community," she is particularly interested in geriatric care.

Two afternoons a week, she spends a total of eight hours seeing patients in an apartment building for senior citizens where the Jones Clinic is based. She is the only nurse providing services there.

"The residents prefer that I come in the afternoon," she says, "because elderly people like to sleep later in the morning." Ms. Cukr made the observation when conferring with community representatives during the planning stages of the project.

"When the clinic first opened, there were only about five patients. Ms. Cukr now carries a caseload of 65 patients who range in age from 63 to 93 years.

What we are trying to do," she points out, "is support the ability of these older persons to live independently in that building."

The clinic consists of two examining rooms located on the main floor plus two cubicles and a conference area. In this setting, Ms. Cukr does examinations, health histories, laboratory tests and similar tasks. "Our job, however, is really to provide health services in a broad sense," she explains.

"This means ensuring that the people observe safety measures and get proper nutrition, necessary clothing and adequate recreation. We also have to educate them to let us know when they need help."

As the primary health care provider, Ms. Cukr screens all patients before referring them for medical follow-through, when indicated. She works closely with Dr. Rhoda Pomerantz, medical director of the Johnson R. Bowman Health Center for the Elderly—a geriatric facility within the Rush system. Dr. Pomerantz, she notes, has encouraged and supported her from the outset of the project.

In cases of elderly persons with special health problems, such as a potential hearing loss, Ms. Cukr will refer them to a specialist at the Medical Center and arrange for the patient's transportation to and from the apartment building.

The second primary site where she practices is the Clarendon Medical Center located on the southeast side of Chicago. An ambulatory care setting for families of all ages, the facility opened in April of last year.

The following July, the community purchased her services from Rush as a nurse practitioner. "I practice eight to ten hours a week there," she reports.

Ms. Cukr estimates that 50

percent of her work time is spent in practice, 40 percent in teaching, 7 percent in administration and 3 percent in research.

As a member of the college faculty and a core course director, she teaches physical assessment to all graduate nursing students. She also carries five students for advisement.

In her practitioner-teacher role, she emphasizes that her first responsibility is to the client she serves. "My second responsibility is to the student who is learning from the experience," she says. Her students accompany her in the field where she provides direct services.

For the future Ms. Cukr would like to do more research, particularly studies on the impact of nurse practitioner services for adult care in terms of quality and cost containment.

More enthusiastic than ever about her work, she declares: "Here you have the beauty of job freedom to develop your role in whatever way is beneficial to patient care—and the most satisfying in addressing the goals of the nursing department as well as the philosophy of Rush."

Innovations in Psychiatric Nursing

Enjoying the roles they have created are two psychiatric nurses, Jane Ulsafer and Sue Liles, who practice in different settings at the Medical Center. Their working relationships, however, are complementary, involving frequent communication and consultation.

Holding the title of assistant professor in the college, as well as associate chairperson, Department of Psychiatric Nursing, Ms. Ulsafer describes the circumstances that brought her to Rush four years ago.

"I had a friend who was working at the Medical Center and when she told me about the system, I was impressed and decided to explore further," she reports. "Now that I have been here for some time, I know that you can never get stagnant."

Ms. Liles shares similar views but she remembers "the way it used to be" when she first joined the staff in 1962 and worked on a maximum security unit.

"The care is so different now," comments Ms. Liles, who is patient care coordinator at the Adult Day Hospital—the oldest partial hospitalization program (established in 1964) in the Midwest located in a private hospital facility.

Open Mondays through Fridays from 8:45 a.m. to 3:15 p.m., the day hospital provides a part-time program for psychiatric patients who are ready for discharge from the in-patient unit, but not completely able to cope with daily living problems. Approximately 35 to 45 patients come for daily therapy. Ms. Liles supervises the entire interdisciplinary team consisting of nurses (including a practitioner-teacher on her staff), social workers, occupational therapists, secretaries and others. The overall program is directed by the chairman of the Department of Psychiatry.

She serves as the liaison person between hospitals, physicians, community and all hospital resources. In addition to coordinating staff conferences, she provides both individual and group therapy and family treatment. Ms. Liles also carries her own caseload of ten patients.

Characterizing herself as a primary therapist, she stresses that this role is one shared by all members of her staff. "From the patient's first day here, we are totally involved with the person and his family.

"Although the facility is closed on weekends, primary therapists are available for emergencies 24 hours a day," she notes.

Nurses do not function as primary therapists, however, on the in-patient psychiatric units located in the East Pavilion of the Medical Center's main hospital building.

"Instead, the psychiatrist is the primary therapist," reports Ms. Ulsafer, "and nurses are clinical care managers. We operate in a collaborative relationship with the psychiatrists."

Summing up her various roles, she emphasizes that "my 24 hours are primarily for the department. I also have my own patient caseload." She prefers a structured time frame for patient care which involves her work in group therapy.

At present, she works with a group of eight to ten women patients whom she assists in dealing with such contemporary problems as marriage and a career, children and other related topics. "We need to build up the self-esteem of these people," she explains. "I also want to pursue a group with both men and women that will focus on other issues."

Ms. Ulsafer, who earned a master's degree in psychiatric and mental health nursing at the University of Colorado, is a practitioner-teacher with commitments to the college in both undergraduate and graduate programs. "I'm a clinical preceptor to students, which means helping them plan and carry out care." She also has an important position within the university setting as president of the Faculty Senate for the College of Nursing.

"Through its members, the senate as well as college committees interlock with university committees," she points out. "Nursing has 18 representatives on university committees. Three of our representatives are on the University Council which serves as a committee on committees.

"Nursing has visibility in the university," she declares, "and sometimes we even have clout!"

Another psychiatric nurse, Chicago native Linda Simko, is enjoying her third year at the Medical Center. Ms. Simko has carved out what she considers a perfect role for herself in the clinical setting: a psychiatric nurse working on a medical unit with patients in normal crisis or preventive psychiatric intervention.

At the same time, she is holding down more administrative responsibilities in the College of Nursing since her recent appointment as acting director of the undergraduate program.

"Our aim is to prepare a generalist in nursing," she states, discussing the undergraduate curriculum. "The student comes here and builds on a science base acquired in another college during the first two years."

She notes that in the core course required of all nursing students, the college of nursing utilizes both nurses and basic scientists from the other colleges (medicine and health sciences) within the university.

Ms. Simko, who describes herself as a "psychiatric-medical practitioner-teacher," is presently carrying a caseload of three patients, one of whom she has been seeing for the past two years.

"The patient is a woman with osteomyelitis who is admitted periodically with chronic pain and reinfection. She is very demanding and this creates problems for the nurses on the unit. So I'm available to help her during this period of stress," she relates.

Because of the stigma she believes is still associated with psychiatric care, many people resist seeing psychiatrists. "We have found, however, that medical patients find the psychiatric nurse less threatening."

Before earning her master of science degree in psychiatric nursing at University of Illinois, Ms. Simko practiced as a medical nurse. That background, she claims, has been useful in establishing better rapport with nurses working on the medical units.

She points out that psychiatric-medical practitioner-teachers now go on rounds with psychiatrists who have patients on nonpsychiatric units.

"The psychiatrists are very sensitive to the input provided by psychiatric nurses in medicine," she adds enthusiastically.

Ms. Simko notes that two new psychiatric nurses were recently assigned to surgical units. "We hope that the trend will carry over to other areas of the Medical Center."

Commenting on the practitioner-teacher role, she observes that each person does it differently. "When I came to Rush, I was more involved in clinical instruction," she adds. "We look at our goals from year to year and then determine where each practitioner can put the emphasis."

Geriatric Nurses Provide Full Range of Care

Lorry Gresham joined the Rush staff as assistant director of nursing of the Johnston R. Bowman Health Center for the Elderly a few months prior to its opening in November 1976. Within two years she was promoted to director as well as associate chairperson, Department of Geriatric/

Primary nurses (right) administer care to a patient in shock.

Gerontological Nursing.

A former student of Luther Christman at Vanderbilt University she later contacted him at Rush while completing graduate studies at the University of Colorado.

The timing couldn't have been better. Planning had been well under way for constructing an imposing new facility that could provide a full range of care for the elderly patient—from acute through the rehabilitative stages of illness, from skilled nursing care to apartments (located on the top two floors) for independent living.

"We started with two patients and four nurses," she recalls.

"Now we have a census of 80 to 85 patients with 47 nurses, including 20 LPNs.

"There are many new graduates (RNs) on staff and this, I believe, is significant. They are eager and full of ideas."

The new facility also appeals to more seasoned nurses like Dorothy Kemp, who practiced community health nursing before joining the Rush Medical Center staff seven years ago, "One reason I enjoy working at Bowman," says Ms. Kemp, coordinator in geriatric nursing, "is that I'm closer to the age group of the patients. And so I can identify with them."

Expressing her concern with the emotional as well as physical problems of the aged, Ms. Kemp notes the overwhelming losses such patients experience.

"The concept applies across the board," she observes, "not just in terms of object losses but those of perception."

Although patients can be directly admitted to the Bowman Health Center, most people come from acute care facilities. The average length of stay is from four to six weeks.

"Our philosophy is based on returning patients to the community able to function more independently," says Ms. Gresham.

'We want to show others that people who may be written off as senile or incapacitated can be restored and that it can be done on a cost-effective basis,"

One of the first nurses Ms. Gresham interviewed for a position at Bowman was Judith Sladek, a new University of Illinois graduate who had worked in Tucson (Ariz.) for the visiting nurse association.

"I had an opportunity with the VNA to work with patients in the community," says Ms. Sladek. "It gave me a different perspective on geriatric care."

As head nurse on the sixth floor, Ms. Sladek asserts that she and her staff are committed to the goal of "keeping the nurse and patient closer together."

She observes that outside each patient's room there is a large cabinet called a nurse server which has several drawers and shelves containing the patients' chart, his medications, supplies and other necessary items.

"By using the nurse server, the nurse doesn't have to go very far from the patient to meet his needs," says Ms. Sladek.

Conspicuously absent from her floor is the traditional nurses' station. Instead there is an open communications area manned by a clerk who handles telephone calls and other messages.

At the Bowman facility there are rooms for 44 patients on each floor which are subdivided into two neighborhoods or "pods" clustering around a common living room. In this bright setting, carpeted and surrounded by colorful furniture, patients play bingo, listen to music and talk with one another. On the bulletin board Ms. Sladek frequently posts a "reality orientation" calendar of daily recreational activities. Off the living room there is a comfortable modern den with books, television and big picture windows.

"All through the building, the rooms have large windows with much light," she observes. "This is to remind the patient that he will be returning to the community."

Each floor, she continues, has a modern dining room where patients have their meals. "We serve in shifts for each pod."

The homelike atmosphere is part of the therapeutic process. Patients are encouraged to wear street clothes whenever possible and their rooms resemble bedrooms instead of hospital rooms.

"Two types of patients are housed at the facility," states Ms. Sladek. "One pod is for patients requiring rehabilitation, which means in addition to nursing care they must meet two or more therapeutic modalities—such as physical therapy, speech therapy or occupational therapy. In the other pod, we have patients who need skilled nursing—that includes daily skilled therapy or treatment. Supportive therapy may not be indicated," she adds.

Reflecting on the year and a half that she has been associated with Bowman, Ms. Sladek comments, "I can't deny there have been frustrations, but the challenge is always there. Also, when we increase our complement of registered nurses, we'll be able to start primary nursing. And I'm looking forward to that."

THE YEAR

Birth Defects

Often unpreventable, some correctable, and many involving a lifetime of treatment and care for patients and families

by Jean Benzies

In the office of Roseanne Vitullo Proteau, M.D., the walls are covered with photographs of children—children in wheelchairs, on crutches, lying in hospital beds and, a few, standing up. All are smiling.

As she talks about the Birth Defects Special Treatment Center at Rush-Presbyterian-St. Luke's Medical Center, Dr. Proteau, Director of the Center and Associate Attending Physician in the Department of Pediatrics, points to the pictures. "Here's Mary Jo, who was born with an opening in her spine and is doing wonderfully . . . This little one with the big grin has just started school in spite of her tracheostomy . . . And Bill, whose hydrocephalic condition seemed so hopeless—you can see how well he's doing."

The Center is a tiny office with two desks, an examining table, a child-sized scale, and lots of files. After she has seen her small patients there, Dr. Proteau refers them to a team of specialists, who represent almost every department within Presbyterian-St. Luke's Hospital

Of every 100 children born, three will have some type of birth defect. Kidney defects, mental retardation, partial or total absence of limbs—there are more than 600 such conditions and the majority have no known cause, so there is no way to prevent them; the only option is to treat and try to correct them. If total correction is impossible, the goal is to help the child achieve as near "normal" function and appearance as is possible. Although some birth defects are slight and can be totally corrected, many involve a lifetime of treatment and care. And for most, the combined resources and expertise of a medical center are vital.

Although Dr. Proteau is sometimes overwhelmed by the sheer magnitude of some of the problems and by the suffering endured by the children and their families she does not feel that her job is a depressing one. "These kids are terrific, you just can't help loving them and doing your best for them."

Dr. Proteau, who has two children, was voted Mother of the Year by the staff and children of Misericordia Home for the Retarded where she is Medical Director. "Being a parent myself," she explains, "it isn't hard in many instances to put myself in the place of the parents whose children I treat and to feel, in some degree, what they are feeling."

As primary physician for all the children treated at the Center, she has a great deal of contact with parents, and sees her involvement with them as an integral part of treatment. She involves parents as much as possible in the care of their children. For example, they learn to use suction machines if their children have severe problems with secretions and to be alert to specific signs and symptoms that indicate medical care is needed.

Dr. Proteau says that, at first, many parents "don't hear" what the doctors say about their child's condition. "They've expected and dreamed of and planned for a healthy baby and they haven't gotten one—this is devastating and understandably takes a long time to believe." And even when they believe it, it's not easy to accept. The people at the Center do what they can, but Dr. Proteau feels strongly that the best source

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Roseanne Vitullo Proteau, M.D., Director of the Birth Defects Special Treatment Center at the Medical Center was named Mother of the year in 1977 by the staff and children of Misericordia Home for the Retarded where she is also Medical Director.

of help and support is someone who has been through the same crisis. So, the Center refers parents to existing parent groups, such as the Illinois Spina Bifida Association, in which, as Dr. Proteau put it, families can say to one another, "We had a similar problem, this is how we handled it, and our lives didn't end. Maybe we can give you a hand."

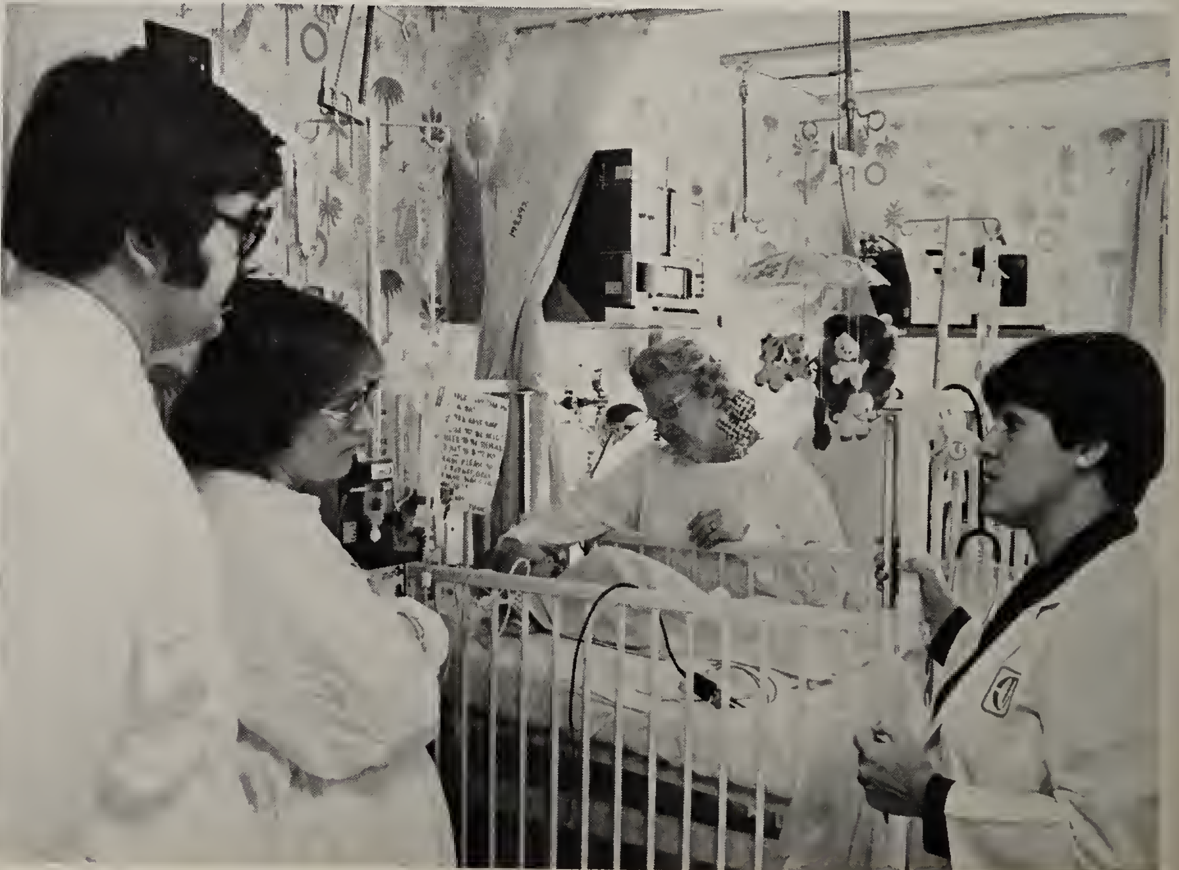
Parents may very understandably have a tendency to overprotect a child with a birth defect and to devote themselves exclusively to that child. Dr. Proteau frequently sees mothers who have never had a "vacation" from a child with a birth defect, and most badly need a respite—both physical and mental. "Parents very often are not willing to say, 'I need some time for myself,' but all human beings do. So we try to put them in touch with housekeeping or babysitting services, or try to persuade the parent to let go enough to send the child to a special school."

Dr. Proteau works closely with Mrs. Katherine Baar, R.N., Nurse Coordinator of the program, who schedules the children's outpatient visits and hospital admissions and visits them daily when they are hospitalized to follow their progress. It is her job to keep records up to date and facilitate communication between members of the treatment team. Mrs. Baar also refers families to the Illinois Division of Services for Crippled Children, which can provide financial assistance and medical equipment, and places families in contact with local physicians, schools, and community groups that may be of help to the children and their families.

The birth defect most often treated at the Medical Center is spina bifida (see article on page 28); almost 30 percent of the 160 children treated through the Center suffer from this rare condition. Spina bifida, which literally means "open spine," is an opening somewhere on the spinal column through which protrudes a myelomeningocele, a sac of spinal fluid and damaged nerve endings. The location of the myelomingocele determines the severity and location of the resultant paralysis. Most children with spina bifida are totally paralyzed from the waist down; 90 percent are born with hydrocephalus; most suffer a series of complications.

When a baby with spina bifida is born at the Medical Center or transferred from another hospital, Dr. Proteau does the initial evaluation of the infant's condition and determines which specialists must be called in to consult. As a rule, treatments for a spinal bifida case involve a neurosurgeon to remove the myelomeningocele and replace the exposed nerves into the spinal canal and, often, to put in a shunt that will drain off the excess fluid in the case of hydrocephalus; an orthopedic surgeon to treat bone and joint problems; a urologist to handle the problems of infection and non-function associated with bladder paralysis; and a physical therapist to help strengthen the muscles of which the child has use. With spina bifida, and many other birth defects, it is impossible to predict with certainty the child's potential for a "normal" life. Treatment begins immediately but it can be years before the extent of the child's capabilities will be known.

Most birth defects require



Roseanne Proteau, M.D., in pediatric intensive care, discusses a case with the parents and grandparents of one of her patients.

immediate correction of the problem or problems and then long-term follow-up, but a few can be taken care of in relatively simple, one- or two-step procedures. John W. Curtin, M.D., Chairman of the Department of Plastic and Reconstructive Surgery, explained that correction of cleft lip or cleft palate, two of the most common deformities treated at the center, each can be done in a 60- to 90-minute operation.

Cleft or split lip, in addition to creating a serious cosmetic problem, can prevent normal sucking movement in a baby and consequently seriously interfere with nutrition. It is corrected by sewing together the two split sections of the lip. This is done when a child is about three months old —at which time the child is old enough to undergo general anesthesia and the lip parts are large enough to work with easily.

Correction of cleft palate, an opening in the roof of the mouth that prevents normal chewing, breathing and talking, is not done until about 14 to 18 months because it is necessary to wait until the child has enough tissue in the mouth to be stretched across the cleft. If enough tissue is not available, a temporary speech prosthesis can be inserted to block off the opening, but eventually most cleft palates can be surgically repaired.

When correcting a cleft palate, the plastic surgeon works closely with an otolaryngologist because nearly all children with a cleft palate have associated middle ear disease, an accumulation of fluid that affects hearing. David Caldarelli, M.D., Chairman of the Department of Otolaryngology and Bronchoesophagology, explained that it is the otolaryngologist's job to determine whether this condition exists, then, if necessary, do the surgical procedure—drainage of the middle ear fluid, and insertion of a temporary plastic drainage tube. The tube remains in place for about six months; however, it is not unusual for children to need a series of these tubes inserted until they reach the teen years, when the problem generally clears up.

Members of Dr. Curtin's department do a variety of other procedures for children treated through the center: separation of the fingers of children born with webbed hands, amputation of extra digits, and reconstruction of ears for children born without them. "We reconstruct the absent ear in two different ways, either using a plastic framework or waiting until the child is about six and taking some of his or her rib cartilege and shaping an ear out of that," Dr. Curtin said. Again, in this procedure, the plastic surgeon works closely with the otolaryngologist who initially will determine if the inner or middle ear is present—if this is the case, the surgeons may be able to insert an inner ear prosthesis that will enable the child to hear.

Some children are born with deformities of a whole or half face. Not long ago, many of these children were simply shut away without hope. Now, surgery offers them a more normal life. A series of operations, necessitating shifting of the facial skeleton and requiring bone grafts, can be done. Naturally, the psychological implications of these problems are enormous, but Dr. Curtin says that "Staunch parents are the key. Some parents react so

John W. Curtin, M.D., checks x-rays before going into surgery.

David Caldarelli, M.D., uses a large model of an ear to show a parent the surgical procedure he will perform on her child.

strongly to a defect that they instill in the child a profound psychological problem, whereas other children with more severe problems but coping parents can be much better adapted."

Another birth defect often treated at the Center is hydrocephalus, swelling of the head caused by excess fluid in the brain. This swelling presses the brain against the bones of the skull and can cause retardation, although, if treatment is immediate, the process sometimes can be reversed and many children with hydrocephalus go on to achieve average or above average intelligence.

Richard Penn, M.D., Associate Attending in the Department of Neurological Surgery, who treats most of the Center's children with hydrocephalus, outlined the treatment for the condition. First, one end of a shunt, a tube with a one-way valve, is put into the brain to siphon off the excess fluid. The other end is pulled along under the skin to the abdomen, where it is inserted and where the excess fluid is easily and harmlessly absorbed. Shunts are meant to be permanent, but they must be closely monitored to prevent malfunction or infection. Often, a child will outgrow a shunt and a new and longer one must be put in. On most children, the shunt is almost invisible; their hair usually covers the part put into the brain; the incision into the abdomen leaves only a small scar; and the tube is indistinguishable in a child with a normal amount of subcutaneous fat.

Many children with hydrocephalus are subject to seizures because the pressure of the fluid in the brain prevents areas of the brain from developing properly. Michele Melyn, M.D., Assistant Attending in the Departments of Neurological Sciences and Pediatrics, sees many children who have seizures resulting from hydrocephalus as well as from a variety of other conditions. Dr. Melyn makes her own medical assessment of each child, taking a careful history and doing a physical exam to determine if the seizures are indeed caused by the birth defect or by another condition. In some rare cases, when seizures have a metabolic cause, they can be controlled by diet, but generally, Dr. Melyn prescribes anti-convulsant drugs and then closely supervises the child who, depending on the problem, may be on the medication for variable periods of time. Of course, multiple problems may hinder complete seizure control despite various therapies.

Because the condition may change or the child may build up a resistance to the medication, a large part of Dr. Melyn's effort involves teaching parents about seizures and the effects of medications so that they can bring the child in for reassessment before a seizure occurs. "We're dealing with an already compromised nervous system, and any seizure these children experience may be more devastating than for an otherwise normal child." Dr. Melyn explained. "If we can see and reassess the child's status in time

Richard Penn, M.D., of the Department of Neurological Surgery.

to prevent multiple seizures-well, its a fantastic gain."

Ken Kuo, M.D., Assistant Attending in the Department of Orthopedic Surgery, treats most of the Center's patients who have orthopedic problems. Sometimes babies are born with a dislocated hip, or deformed bones or joints, or may later develop such problems as a result of other conditions. He uses bracing or surgery to put the extremities or the spine into positions in which they can better function.

If at all possible, Dr. Kuo tries to enable the patient to stand. This is vital for correct kidney function and is equally important for morale because the psychological boost of being able to stand is very important. Dr. Kuo and the other specialists work with an entire treatment plan in mind. For example, even if it were surgically possible, it makes little sense to correct a foot deformity in a patient who will never be able to walk.

Kidney malfunctions result from many birth defects, particularly in children confined to wheelchairs. The majority of kidney problems involve incomplete voiding of the bladder, which can lead to infections of the entire urinary tract. Incomplete voiding is the birth defect most frequently seen by Shahid Ekbal, M.D., Assistant Attending in the Department of Urology. In some cases, treatment is intermittent catheterization, a simple, painless procedure in which a plastic tube is inserted into the bladder three to four times a day to drain out urine. The physician usually teaches parents to do this and frequently the children learn to do it themselves.

Children with birth defects may need a lot of physical therapy, and Mary Liz Etzel, M.S., Department of Physical Therapy, sees almost every child treated through the Center. She works in a large light room with bright pictures on the walls and a cabinet full of toys and puzzles. Parents and children work together on the floor or at the walking bars.

The goal of physical therapy is to help children realize their fullest potential, whether it be the ability to walk, crawl, sit up, balance, or simply hold up their heads.

Because brain plasticity is greatest during the first 18 months of life, it is during this period that a child has the greatest potential for improvement of motor problems. So, physical therapy begins early, often when a child is only a few weeks old. Ms. Etzel demonstrated the moving techniques ("please don't call them exercises—these aren't things you do ten times a day, they're things you do every time you move"), while working on the floor with an infant. She took his head in her hands and slowly turned it to one side, forcing him to use his own muscles to turn over the rest of his body. "See, there's nothing forced or unnatural about it.

"I try to help the parents find strong points in the child. Everybody else is telling them all about

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Coping With Spina Bifida—How One Family Manages

The first thing you notice about Sharon Grill is her big smile. The first thing you notice about her nine children is their friendly good manners. And the first thing you notice about her three-year-old daughter, Mary Jo, is that she doesn't stand out from the rest, even though she has spina bifida (a birth defect caused by an opening in the spine that usually results in severe paralysis and a series of related problems). The same goes for 17-month-old Gerry, whom the Grills recently adopted—he has spina bifida, too.

Mrs. Grill remembers "When Mary Jo was born at our local hospital, the obstetrician turned her toward me so I could see her back and said 'It looks like you have a little problem here.'"

Within a few hours, the baby was transferred by ambulance to the Medical Center. A nurse held her the whole way; her father and grandparents followed in their cars. She was operated on to repair the opening in her spine before she was 24 hours old; two weeks later a second operation became necessary to relieve her hydrocephalic condition.

At the local hospital, Mrs. Grill had to wait for news about Mary Jo. She didn't realize what the situation was until her husband came back from Rush, where Roseanne Proteau, M.D., Director of the Birth Defects Special Treatment Center, and other specialists had given him the full story of Mary Jo's problem and its possible complication. "One thing about the people there, they really tell you everything you want to know. Last time I brought Mary Jo in for a check-up a student nurse came into the examining room and asked about her condition. I was able to tell her so much about spina bifida that she was amazed."

But at first the Grills didn't know what to expect and it was too early to tell how severe Mary Jo's problem would be. However, the doctors were encouraged because the opening was located low on her spine, which indicated there was not a great deal of involvement, and she was able to move her legs and seemed very alert.

Mary Jo was in the special care nursery at Rush for a short while, then was transferred to the pediatric unit. When she was five days old, her mother left the community hospital and began coming to the Medical Center each day to breastfeed her. When Mary Jo was two weeks old, the Grills both started coming regularly to help with her physical therapy and to learn how to do her movement techniques at home. (Mrs. Grill says the program was so successful that Mary Jo sat up at five and a half months, whereas the other Grill children hadn't begun to sit up until they were about seven months old.)

At 13 months, Mary Jo started walking with crutches—one of the youngest children ever to do so. Mrs. Grill remembers that Mary Jo was so little and uncertain that the physical therapist had to hold her hands on the crutches as she explained to the child that if she let go of them, as she did at first, she would fall. "It hurt us to see that. It crushes you but you have to let them keep trying. We decided right from the first to do

The Grill family (Mr. Grill not pictured); Mary Jo is held by her mother, Jerry is held by one of his brothers.

everything we could to help her be independent."

Mary Jo did learn to walk with the crutches, then, at one and a half, she was able to get around in long braces and, now, at three and a half, she walks and runs like any other child and wears only a pair of milky colored plastic short braces that are barely distinguishable against her white tights or knee socks. In slacks, the braces are not noticeable at all. She can walk a little bit without the short braces (although she will probably have to wear them for the rest of her life) and she takes them off when she goes to bed.

Both Mary Jo and Gerry wear bells on their shoes. It's part of the independence effort — Mrs. Grill doesn't want to curtail their movements or hover over them, but she does need to know where they are. So, she lets them go and keeps an ear cocked for the jingle.

"I think Mary Jo came so far so fast because of the large family," Mrs. Grill said. "The other children took a lot of time with her, encouraged her and worked with her. For example, she had bars that she walked between to strengthen her legs. Well, the other children would take turns standing at the far end of the bars with cookies in their hands to encourage her to keep practicing."

Mary Jo attended The Good Shepherd Center for Exceptional Children, a school for handicapped children under the age of three; but, now, she is in a regular nursery class at the local school. It was a struggle to get Mary Jo into it. "They wanted to put her in a class for the handicapped, but her physical therapist had said she didn't think that would be good for Mary Jo because the other kids might hold her back. I just insisted and finally they gave in. Now she is making such progress that it is beginning to look like she might go to kindergarten a year early."

Mary Jo also is doing well medically. Her condition has stabilized although she is incontinent and may need ankle surgery in a few years. Every three or four months she comes to the Medical Center for check-ups.

Mrs. Grill said that Mary Jo usually cooperates with her parents and her medical team, but every once in a while she rebels. "For a while she was wearing a bar that attached to her shoes at night. She really didn't like that and would sometimes object to putting it on. I would tell her 'Yes, it is *yucky,* and when we see the doctor we'll tell him that we're going to throw it in the waste basket.' Then she'd laugh and put in on. We've worked hard to keep her attitude good. We point out other people on crutches or in wheelchairs. And we tell her, 'You have weak legs and have to wear braces. Well, Laurie and Jeanie have crooked teeth and they wear braces, too; and Keith and Robert and Greg have weak eyes so they wear glasses.'"

As for Gerry, he's going to Good Shepherd next year. Like Mary Jo, he is incontinent and he, too, may need foot surgery, but it's obvious that his mind is going to be fine. As Mrs. Grill talked about him, she was interrupted by five-year-old Susie who summed up the situation: "Gerry's OK. He can say 'one-two-three-four and cookie.'" Mrs. Grill laughingly confirmed this and added that cookie was his first word "and he hasn't stopped saying it, either."

Why did the Grills adopt another child with a birth defect? "Well," Mrs. Grill said, "after Mary Jo, we got to know what needed to be done and realized we could do it. Most people are scared off by a problem like this. We just aren't any more. So much love is shared with a handicapped child that a very deep, close relationship develops. Mary Jo and Gerry have brought so much joy into our family that we try to enjoy each day with them and not worry about the future."

Dr. Proteau examines Mary Jo Grill and reviews her condition with Mrs. Grill.

continued from page 27

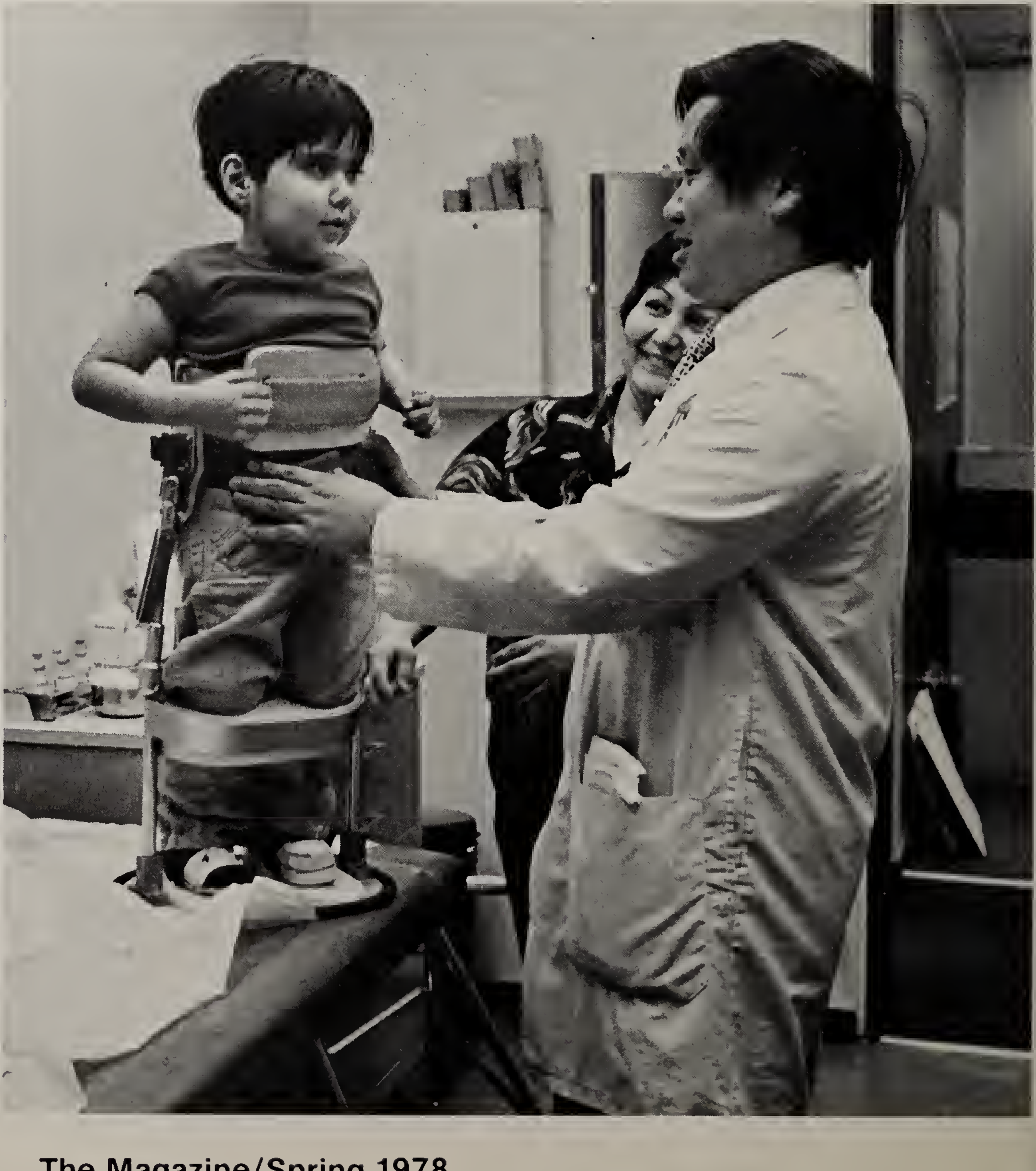
the weaknesses—I try to help the parents enjoy their kids and find satisfaction in them. For example, I'll comment that 'Wow, she looks a lot like her Dad', or point out that a child really watches the parents as they walk around the room, or say 'What a special smile he gave you.' " This encouragement is especially important for the many parents who are actually afraid to touch the children, to pick them up, or to hold them.

Ms. Etzel spends a great deal of her time teaching parents how to work with their child at home. She encourages parents to take the child out with them as much as possible. Because handicapped children can't crawl or walk as others do, they miss out on a lot of the motor experiences that other children have. In essence, their learning experiences are cut down, and this can lead to secondary retardation. Ms. Etzel insists that "You shouldn't cut down a child's environment just because he has crutches or braces. You'd be surprised at how many of these kids never see a zoo or a fire house."

Paul Driscoll, M.Ed., Adjunct Scientist, Departments of Pediatrics and Psychology, evaluates the intellectual and personality functioning of the children at the Center. It can be difficult to assess these intellectual capacities because the children often are incapable of responding to normal testing procedures, most of which require the ability to either manipulate objects with one's hands or to verbalize. In addition, these children have had limited exposure to others and to the stimuli that would encourage them to expand their capacities. Consequently, many children with birth defects may appear intellectually slower or emotionally more immature than they actually are.

Mr. Driscoll cited the case of a multiply handicapped little girl who consistently referred to herself in the third person—a mode of verbalization that raised the question of severe emotional disturbance. Intellectual testing showed that the child was only slightly below average for her age group, and further investigation revealed that she was simply mimicking the only speech patterns she had heard—the people in her environment had always talked to her in the third person.

Special methods are often necessary to test children with birth defects. For children unable to follow verbal requests or respond vocally, Mr. Driscoll may use a test such as the Leiter Scale, which merely requires the child to observe and imitate the match-



Ken Kuo, M.D., adjusts a child's parapodium, a device that helps the child to stand up and walk, while her mother looks on.

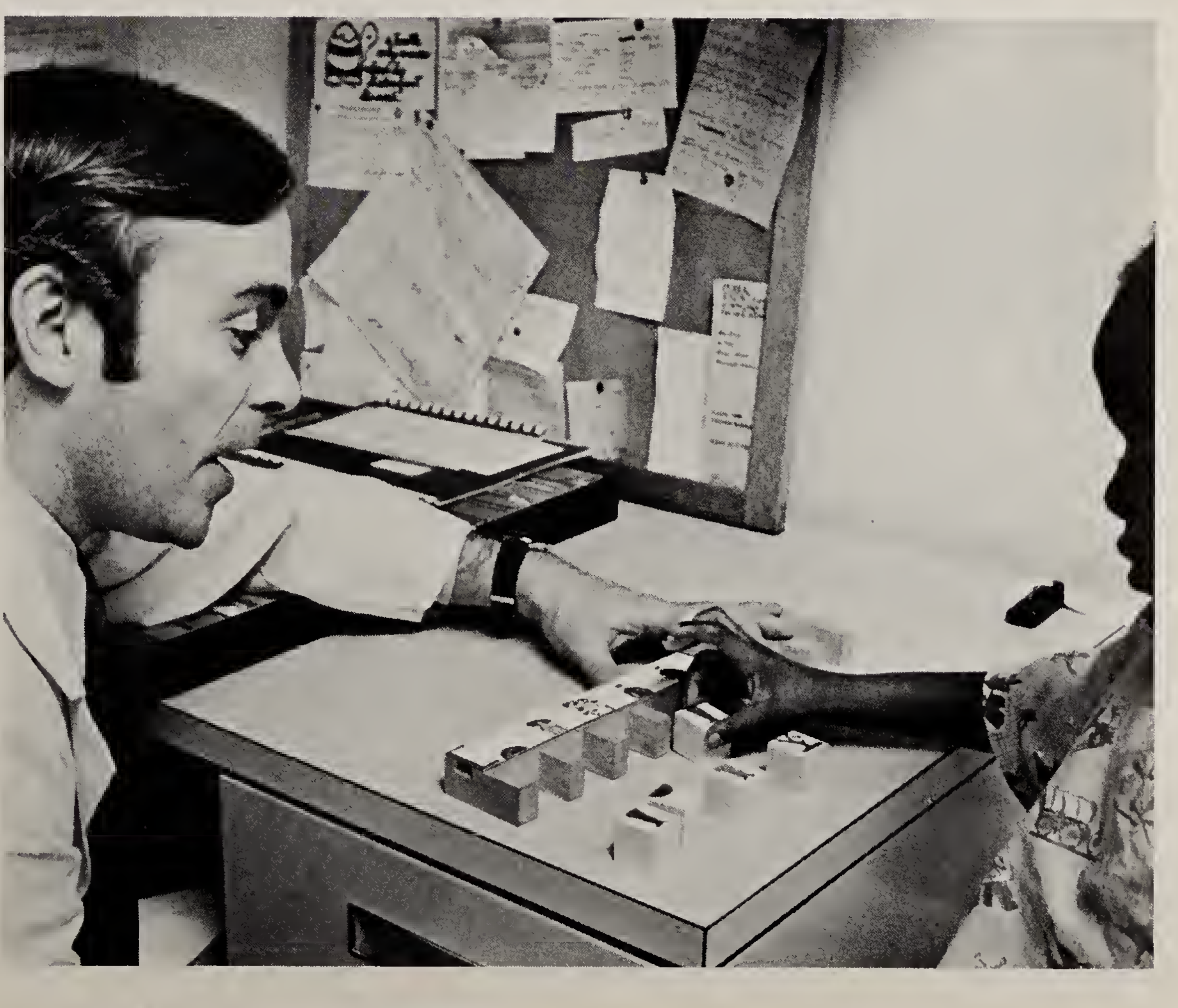
Mary Liz Etzel, M.S., encourages a young patient to sharpen his motor skills by playing with his favorite toy-when he hits a key, a little figure pops out and makes a noise.

ing of colors and symbols. In many cases, portions of various tests must be combined to arrive at an assessment.

Mr. Driscoll prefers to test the children by themselves to maximize their attention, but if a child becomes wary or frightened, he asks a parent to come along. Typically, these children are shy because their physical condition has prevented them from socializing. In addition, they are often withdrawn because they can sense people's negative reactions to their handicaps. "Despite all of this," Mr. Driscoll says "most of them are absolutely delightful kids, once you've broken through the facade."

Getting the children to verbalize is often a problem, even for those intellectually and physically able to communicate. "Too often," Mr. Driscoll says, "they've had people both talk and 'do' for them." He believes they should be enrolled in schools as soon as possible, both to help them become comfortable in social settings, and to stimulate and encourage them. And, equally important, to get them out of the house and give the parents a respite.

Sometimes the parents' adjustment problems are as great as the child's, and Mr. Driscoll works directly with them to ease the tensions and help them communicate their feelings to one another. "It is not uncommon during



Paul Driscoll, M. Ed., encourages a young friend to match up the separated halves of these forms.

a discussion to see one parent look at the other with awe and say 'Why didn't you ever tell me that before—I didn't think you felt that way.'" Not surprisingly, a frequent problem is the parent's natural tendency to overprotect the child. For a child who is already quite physically dependent on a parent, this may only aggravate an already difficult situation.

Mr. Driscoll also works individually with the older children on issues potentially critical to their emotional and intellectual development. For example, the trauma of separation from the mother that every child faces when it becomes time to go to school can be especially threatening to a child who literally may never have been away from a parent before. "In a case like that I would gear the conversation with the child toward school and begin to explore his or her thoughts and feelings regarding the subject. As we proceed, our discussions would uncover some of the child's questions and anxieties and we jointly would attempt to work out ways to reduce the tension and cope productively."

Parents who have had a child with a birth defect naturally are concerned about the diagnosis and natural course of the disorder and about the health of future children. The Center offers genetic counseling and testing for these couples. "Even if a problem doesn't have genetic implications, the parents usually need to know this," explained Jeannette Israel, M.D., Adjunct Attending, Department of Pediatrics.

Much of Dr. Israel's work with the Center involves children born with Down syndrome, probably the commonest chromosomal birth defect. One child in every 600 has Down syndrome; However, women 35 years and older are at increased risk of having a child with Down syndrome or other chromosomal abnormalities. At 35 years of age, the risk of having a child with a chromosomal abnormality is 1 in 100. This risk increases steadily with every year a woman ages. Down syndrome (formerly called "mongolism") is a form of retardation accompanied by a specific type of facial and physical appearance. It is caused by a chromosome abnormality—the average person has 46 chromosomes in each cell while a child with Down syndrome has 47.

There is no medical treatment for a child with Down syndrome, but one breakthrough has occured recently. Because of a speech problem often associated with the syndrome, many of these children were unable to talk and, consequently, were considered intellectually incapable of communication. However, doctors and nurses have found that many of them can be taught sign language, and in this way they have opened up whole new perspectives to these children who, Dr. Proteau said, are gentle, loving people and exceptionally eager to please.

When a newborn is suspected of having Down syndrome, Dr. Israel takes a blood sample and does the tests necessary to verify that diagnosis. These tests take at least two weeks: First the blood is put into a special medium that stimulates its cells to divide, and then an agent is added to cause the division to stop. Next, the blood sample is run through several different solutions so it can be put on a slide and, when viewed through the microscope,

Jeannette Israel, M.D., uses a microscope that projects the slide of magnified chromosomes onto a large viewing screen.

Dr. Proteau and Katherine Baar, R.N., sit down for a chat with a patient and her mother.

the chromosomes can be counted. At Rush the geneticists have microscopes that are attached to screens so the slide can be projected onto a large viewing area. Photos can be made from these screens and filed in the patient's chart.

A woman who has had one child with Down syndrome is at increased risk of having another child with the same condition. However, chromosome analysis can be done on both the child and the parents to help predict the risks for future children.

If the woman is already pregnant, she can undergo amniocentesis, a relatively simple procedure in which a hypodermic syringe is used to draw amniotic fluid from the womb. (Unborn babies, like everyone else, constantly shed their outer layer of skin; these skin cells float in the amniotic fluid and, when amniocentesis is done, it is these cells that are studied along with the fluid itself to obtain information about the child.)

Although the procedure is simple and quick, the lab work is not; amniotic fluid cells must be cultured, allowed to grow over a period of three to four weeks, then analyzed. The test is 99.4 percent accurate and can be used to diagnose more than 80 genetic conditions, including spina bifida, Tay-Sachs disease, and many other biochemical abnormalities. "We tell parents that amniocentesis is available," Dr. Israel said, "but we don't try to influence them one way or the other, either for amniocentesis or, if the findings indicate a problem, for termination."

Rush also offers counseling for parents who have had a child with a birth defect and are wondering about future pregnancies. Counseling, based on lab results when applicable, and on patient and medical history, gives the parents the information necessary to make informed decisions regarding their own health and that of future children.

None of these decisions are easy. But the hardest part often comes after the medical problems have been faced, after the surgical procedures and therapy are over—it comes when the children face the world and begin to struggle with public transportation that can't accommodate them, curbs too high for a wheelchair, steps too steep for crutches, jobs they are capable of but won't be offered because they are "different."

Clearly, medical care is not enough. "You have to try to influence society to change its attitude...you have to be an advocate for what they can become. We have a responsibility to make the lives of the children meaningful," says Dr. Proteau. So, the people at the Birth Defect Special Treatment Center work with state and federal agencies to arrange and increase funds for the children; they work with special schools and with national and local organizations; and they have encouraged parents' groups to be champions of the rights of their children. Once organized, parents and concerned people who are aware of the problems can lobby for more special education or government funding, more special recreational facilities, and more and better job opportunities for the handicapped.

A lot is happening to help children with birth defects and as Dr. Proteau said, "The thing that keeps me and most of us at the Center going is the belief that everything we do helps...."

Applying advanced scientific training as a member of the health care team

The Clinical Nutritionist

by Stan Zoller

Food, Glorious Food
Hot sausage and mustard!
While we're in the mood,
Cold jelly and custard!
Pease puddings and saveloys!
What next? Is the question.
Rich gentlemen have it, boys
In-dye-gest-tion!

from Oliver! by Lionel Bart
Copyright, 1960 Lakeview Music Co., Ltd., London, England

Chances are that for Dickensian gentlemen indigestion was the least of their nutritional problems, just as a good portion of the American population has eating habits with more serious consequences.

Many Americans will eat anything that is available—whether through luxury or necessity. Not only do they drive too fast, drink and smoke too much, and not relax enough—they eat poorly.

There is, however, a growing public awareness of the need for proper nutrition, and it has opened new areas for study by those in the health professions. What should we be eating? What avoiding? Why do some things we eat drastically affect our health?

For physicians and other health professionals, the questions are posed differently. How do we cope with nutritional problems for those patients with special needs? Are we qualified to handle all aspects of nutrition, and, if not, who is?

"Ten years ago," says James A. Schoenberger, M.D., professor and Chairman of the Department of Preventive Medicine at Rush-Presbyterian-St. Luke's Medical Center, "when a patient was released from the hospital he was given a diet, told to follow it and to do the best he could." Things have changed since that time. Medicine is more acutely aware of the problems of diet as it relates to coronary patients, diabetics, geriatrics, renal patients, and in community medicine among other crucial areas.

Nutritional problems facing Americans today include obesity, overuse of salt, and too much saturated fat and cholesterol. Physicians stress the importance of proper nutrition to their patients, and often give them diets to follow. But, says Dr. Schoenberger, it's not enough.

"People will follow a diet for a couple of weeks and look for a quick and easy solution. But it takes a lifetime to change and maintain new dietary procedures."

Dr. Schoenberger-principal investigator in the Medical Center's Multiple Risk Factor Intervention

Research in Clinical Nutrition

What do physicians know about nutrition? How can adolescent obesity best be controlled? These are just two of the topics being studied as part of the research effort of the Section of Clinical Nutrition at Rush-Presbyterian-St. Luke's Medical Center.

"Our research is aimed both at furthering our understanding of the role of nutrition in various areas, such as early development, and in helping patients with specific medical problems to understand diet modifications and how their disease affects their diet," says Dorice Narins, Ph.D., Director of the section.

Investigators are interested in learning how much physicians know about nutrition because they think nutrition should be emphasized more by physicians and should be a more important part of the medical school curriculum. "Our premise in this study," says Dr. Narins, "is to find out what areas of nutrition need to be emphasized to both the medical student and to the practicing physician."

Another study is designed to learn what works best for adolescent weight control—one-to-one conferences or group interaction. That study is being conducted by Dr. Narins, Terry Dolecek, M.S., R.D., and Niki Gernhoeffer, M.S.

This section also is concerned about improving nutrition education techniques and is currently developing two booklets to aid patients with specific medical problems. One booklet, being prepared by Dr. Narins and Susan Boettcher, M.S., will be for diabetics and will serve as a self-instruction guide. It will be arranged in a question-and-answer format and will include diet instruction to best fit the needs of the diabetic patient.

The second pamphlet will answer questions most commonly asked about ileojejunal bypass

Deborah Roland, M.S., R.D., discusses a new diet with a patient.

Trial (MRFIT)—a program testing the theory that heart attacks can be prevented by intervening simultaneously against the major risk factors of heart diseases in a group of high-risk men between 35 and 57 years old—has found this true with the program's participants.

MRFIT participants are monitored by follow-up visits, something Dr. Schoenberger says is often difficult for physicians in private practice.

"Unfortunately, a big problem with nutrition education is getting it accepted into a physician's office. Doctors don't perceive the need for getting nutritional advice and many still do what they did ten years ago. And part of the problem is just that—many doctors haven't changed in ten years.

"We have to educate many doctors to the fact that they don't know enough about nutrition and they didn't learn enough about nutrition in medical school, and that patients need counseling on it."

To effectively educate patients in nutrition, Dr. Schoenberger suggests the use of specialists in nutrition. Ideally, patients could be referred to a nutritionist by an attending physician, or perhaps large practices and health maintenance organizations (HMOs) could have nutri-

surgery.

"Our main objective with this booklet," explains Dr. Narins, "is to tell the patient how to cope with things after surgery." She is being assisted in this project by Vivian Woo, M.S.

As self-education is important to patients, continuing education about nutrition for health care professionals is also a concern in the section.

Dr. Narins and Deborah Roland, M.S., R.D., are currently working on a continuing education program on infant nutrition. Using slide and audiovisual equipment, Dr. Narins says that it is designed "for health care professionals not only to provide them with current information, but also to introduce them to new developments."

Biochemical research is also being conducted by Ms. Roland, Susan Moy, M.S., and Francine Dudzinski, M.S., on the effects of carbohydrate levels on weight control by comparing two groups with different amounts of carbohydrate intake.

Arthur Rossoff, M.D., Assistant Professor of Medicine (Medical Oncology), and Barbara Palac, M.S., are trying to determine how the diets of cancer patients supplemented with zinc might affect their taste perception. This double-blind study compares test results between patients with cancer given zinc supplements or a placebo.

Several key projects are planned for the future. Investigators Anatoly Bezkorovainy, Ph.D., and Colin Morley, G.D., Ph.D., both of the Department of Biochemistry, will study protein metabolism and how proteins in milk affect infant development.

Research proposals have been made by the Section of Clinical Nutrition for projects which would examine the effects of maternal alcoholism and zinc deficiency on fetal development, the relationship between the nature of early feedings and infant obesity, and further research into nutritional problems in cancer patients.

tion counselors on staff. Recognition by physicians that nutrition is a growing specialty and that there are many people who might know more about nutrition than they do is a major barrier to be overcome.

Specialization in nutrition is nothing new. Master of Science degrees have been offered by many universities for years, but just as medicine has gone through changes, and initiated new specialties, so has clinical nutrition.

In 1974, the College of Health Sciences (then the College of Nursing and Allied Health Sciences), began offering an M.S. degree in clinical nutrition. The program, one of eight offered in the college leading towards degrees in health and basic sciences, is a graduate program for nutritionists interested in working in a health field.

One of the foremost goals of the program, explains Dorice Narins, Ph.D., Director of the Section of Clinical Nutrition, and associate professor in the College of Health Sciences, is to increase the knowledge of health care professionals about proper nutrition.

Most students in the program already have a background in dietetics. Indeed, many are registered dieticians seeking a chance to specialize within the field. "We've found that most of our M.S. candidates not only have a specific interest in clinical nutrition, but are very much interested in people-oriented work," says Dr. Narins, "an important factor" in clinical nutrition.

The graduate program in clinical nutrition is four quarters long, equally split between classroom and practical training. The first two quarters are primarily classroom training emphasizing the biochemical aspects of nutrition. Courses generally include biochemistry, nutritional physiology, and nutritional pathophysiology.

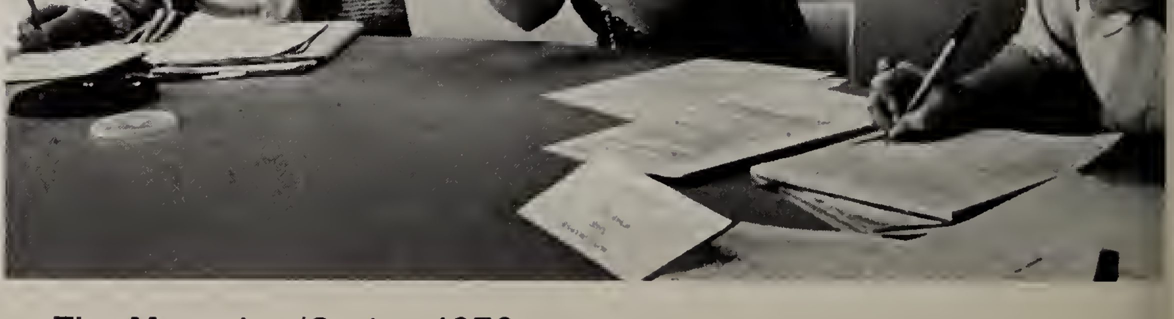
Clinical nutritionists must be grounded in the sciences to keep up with changes in a changing field. "Thirty years ago the nutritionist or dietician was filling a physician's orders without questions," says Virginia Pinney, M.S., Director of Food Service and Associate Director of the Section of Clinical Nutrition. "But that role is changing and there is much more emphasis on the nutritionist's involvement with patient care."

Students in the clinical nutrition program work closely with attending physicians and are involved in the entire process of developing a nutrition program for patients; they specialize in a specific area of patient care, and their last two quarters are spent almost exclusively on this practical training. Many avenues are open to the clinical nutritionist, including pediatrics, adolescent medicine, nephrology, community medicine, geriatric care, and nutrition for surgical patients.

"We encourage the students to pick an area of their particular interest," says Dr. Narins. "That way they can get a feeling for the area before completing the program."

Although he hasn't begun his practical training, Robert Boyle, who has a B.S. in biology, is a student in the clinical nutrition program at Rush, hopes to work in the MRFIT program simply because of his interest in heart disease. "Death from coronary disease is the number one killer in the country," he says, "I'm interested in the effect nutrition might have on the rate of heart attacks in the country."

Dr. Schoenberger is convinced there is a significant relationship between the two. "The consumption of saturated fat and cholesterol in this country has dropped a third over recent years while



Dorice Narins, Ph.D., Director of the Section of Clinical Nutrition, emphasizes a point during a class.

Clinical nutritionists are often called upon to work with physicians involved in research. Paul Wong, M.D. (left), Director, Section of Genetics and Human Development, discusses amino acid profile with Deborah Roland, M.S., R.D.

the number of heart attacks has also dropped.

"Interestingly enough, Japan, which has always had a low rate of coronary deaths is beginning to Westernize its diet, and as it does, the rate of heart attacks is going up."

Dr. Schoenberger says the traditional Oriental diet, which generally includes natural grain, fruits, vegetables, and the use of vegetable oil in place of animal fat, is one of best diets for maintaining a good cholesterol rate and lowering the chance of heart disease.

"The ideal cholesterol level is between 150 and 160," he says. "I'd say the average in this country is 220. But that's an improvement. It's down from 240."

Students do their practical experience at Presbyterian-St. Luke's Hospital, or near the main Medical Center campus, or sometimes at an affiliated hospital.

While practical training takes place in a clinical surrounding, some students from the clinical nutrition program can apply their talents elsewhere after graduating.

Departure from the health care field does not obviate roles in consumer nutritional health, says Deborah Roland, M.S., R.D., assistant professor in the Clinical Nutrition Program, "More firms are seeking graduate trained nutritionists because of the public's increased concern about proper diet. The food industry now has to substantiate the nutritional quality of its products as well as marketing them, and many clinical nutritionists find they can serve effectively in both areas."

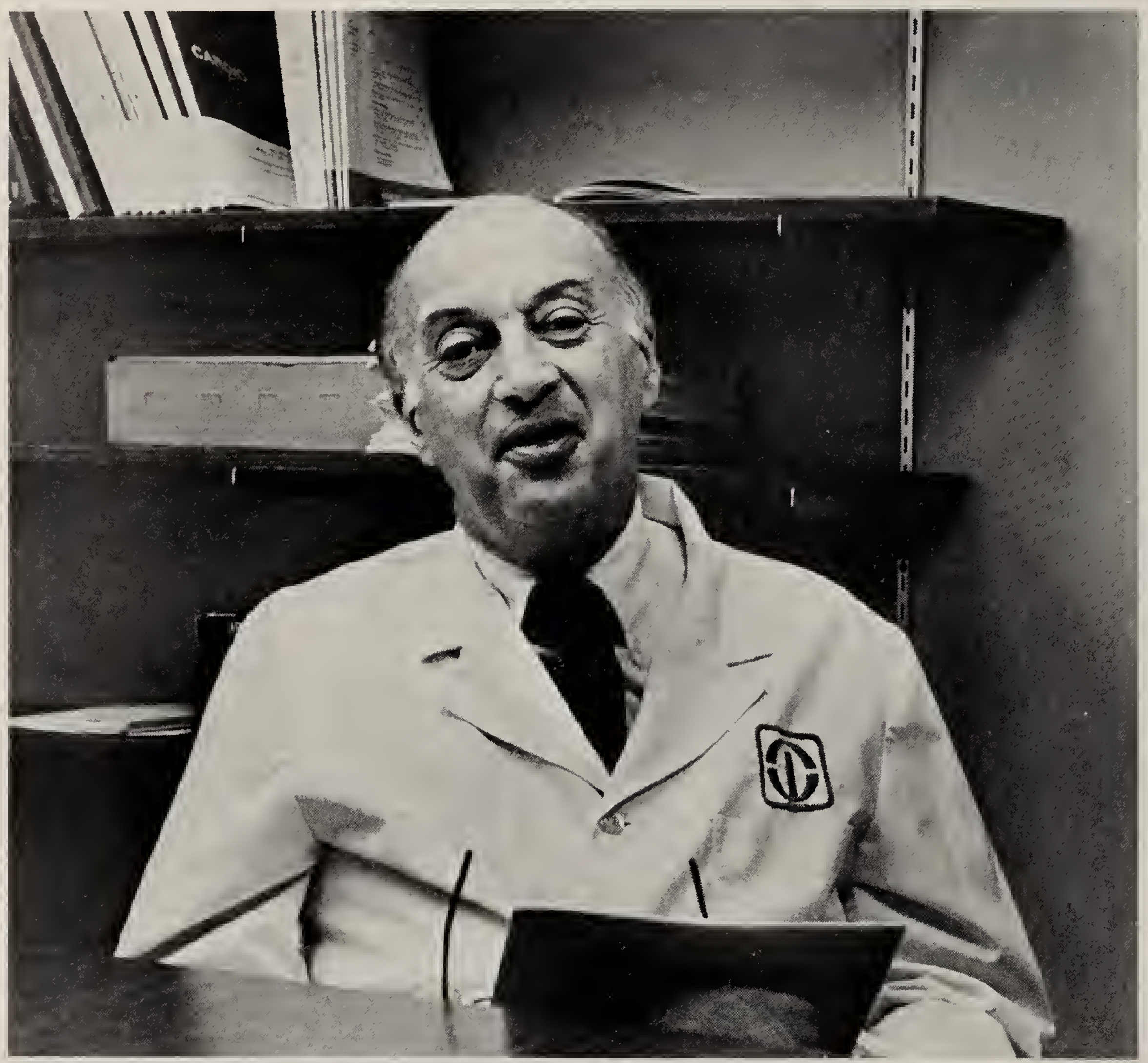
Students in the Rush program spend over 300 hours in their clinical training giving them an opportunity to "become actively involved in patient care by working with physicians, nurses, and psychologists who make up the health care team a clinical nutritionist is likely to work with.

"It's mentioned in the classroom," says Dr. Narins, "but it's something the student has to experience on an individual basis." Before the practical training, the students' contact with physicians is usually limited to classes where they are enrolled with Phase I medical students. "Taking classes with medical students gives them a feeling for the team approach early in the program," says Dr. Narins.

Terry Dolecek, M.S., R.D., instructor in the clinical nutrition program in the College of Health Sciences, and of preventive medicine at Rush Medical College, and chief nutritionist in the MRFIT program, teaches "Assessment of Nutritional Status," where students learn to evaluate a patient's biochemical background, dietary history, and clinical needs. The course also includes a section on proper interviewing techniques.

Interviewing techniques for clinical nutritionists? Ms. Dolecek says "It's especially important for clinical nutritionists to know how to work with and relate to people, since food is a personal thing to a lot of people and it often requires special skills to get appropriate information from patients."

Obtaining information from patients is essential when a clinical nutritionist makes the biochemi-



"People will follow a diet for a couple of weeks and look for a quick and easy solution. But it takes a lifetime to change and maintain new dietary procedures," says James A. Schoenberger, M.D., professor and Chairman of the Department of Preventive Medicine.

cal assessment from physician-ordered tests. This is critical information when dealing with specific medical problems such as diabetes, coronary, or renal disease.

"The clinical nutritionist doesn't do any actual laboratory work," explains Ms. Roland, "but will carefully review previous tests, especially those for cholesterol, glucose and albumin.

"There is no standard test for establishing a patient's nutritional status. Once a clinical nutritionist goes over existing tests, he or she might then suggest to the attending physicians what additional tests are needed."

Working with the attending physicians and test results, the clinical nutritionist is able to develop specific, individual diets for patients and make recommendations to the physician.

In the MRFIT program, Ms. Dolecek says, "the entire health care team meets weekly to discuss the progress of the participants. From these meetings and the test information, the nutritionist is able to decide what changes in a participant's diet might have to be made.

"We can usually get an idea on the progress made, or changes needed," says Ms. Dolecek. "If we have to reduce meat consumption, we work it out with the participant at a counseling session."

Follow-up is essential in nutritional counseling, says Ms. Pinney. "If we can get physicians to persuade the patients to return for follow-up care, we have a better idea of whether they are following their diets.

"It's terribly important. Most coronary patients for example, have to change their lifestyle—in 99 out of 100 cases. And they just won't do it alone. Neither will two weeks in the hospital. They have to learn the importance of it, as does the family. It's something you just can't teach in an hour. The same is true with a diabetic who has to learn about new foods, eating patterns and how to eat in restaurants. All it really takes is time and a lot of strong reinforcement."

The key to a total assessment, or to having a patient follow a diet, is getting complete information. Good interviewing techniques are invaluable for this task.

"In the MRFIT program," says Ms. Dolecek, "our participants are men between 35 and 57. Their needs generally include a low saturated fat diet, low cholesterol, and often a weight reduction or maintenance program." Students in the MRFIT program must learn the participant's general lifestyle and nutritional background, whether the participant travels a lot, whether he eats a lot of "fast food," what his socioeconomic background is, and who cooks his meals—all of which play an important part of the clinical nutritionist's assessment.

Similar information is necessary to help younger patients. "One of the toughest things to do in medicine is change someone's diet," says Gary Strokosch, M.D., Director, Section of Adolescent and Young Adult Medicine. "It's especially true with adolescents because they generally tell you they have 'more important things to do than stick to a diet.

"It's not easy telling adolescents to do something if you are not willing to bargain with them."

A clinical nutritionist has to know how to handle adolescent trade-offs. The best thing, according to Dr. Strokosch, is to let the adolescent have his or her own way whenever possible. This can establish a give-and-take relationship between the physician and the patient.

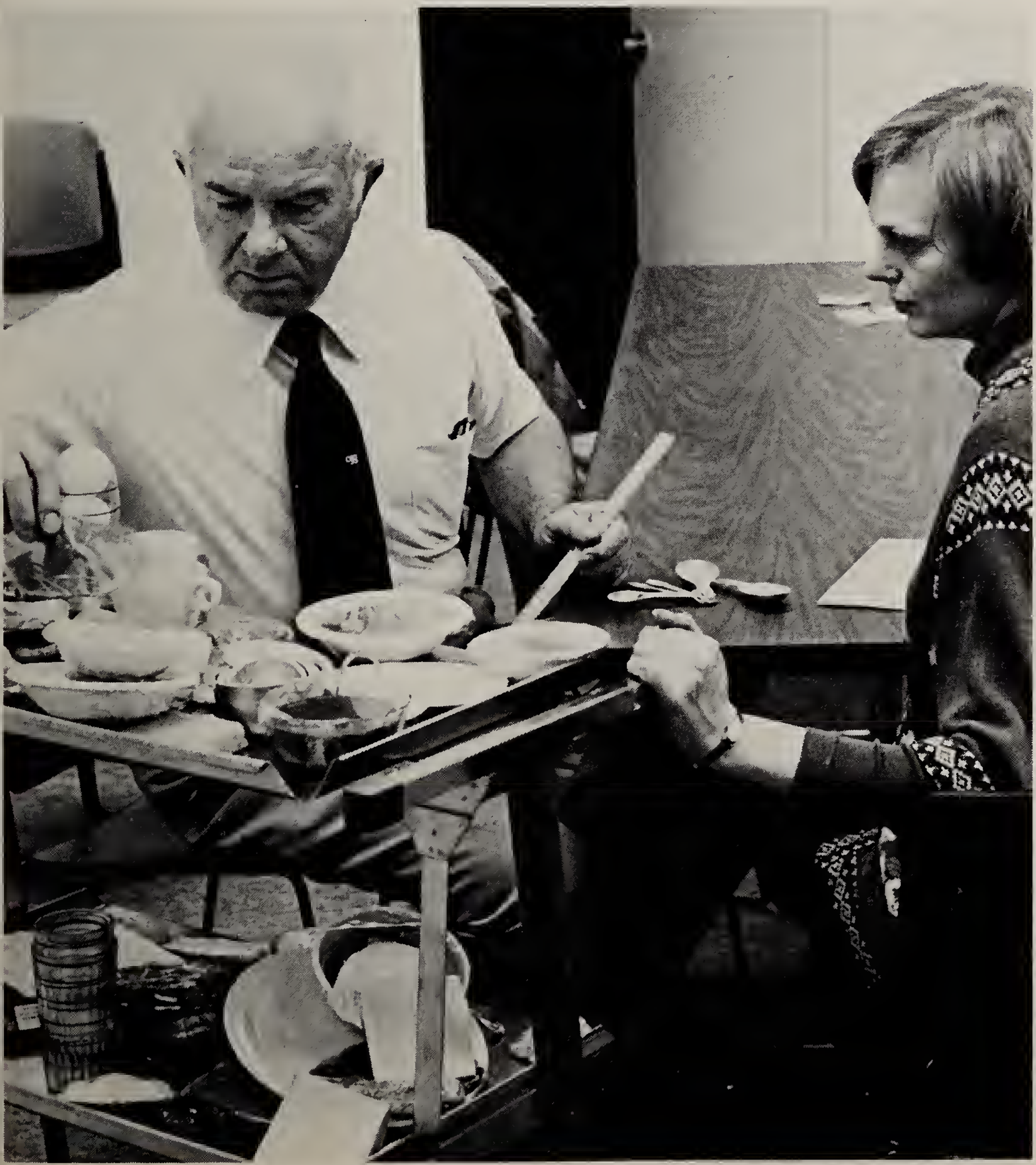
Ms. Dolecek, who also works with pediatric patients, has a good success rate with younger patients for a simple reason—parents. "They have control over what the child eats, whereas the adolescent and MRFIT participants often have a completely different lifestyle." In the case of the MRFIT participant, she says, eating habits have been established over many years and he might be following a diet brought on by his lifestyle. Adolescents on the other hand might have some of their eating habits dictated by "peer pressure."

Dr. Strokosch points out that the clinical nutritionist can help change a person's diet by providing a "good base for behavorial modification. They can also have a big role in a patient's health program as part of the health care team."

That team includes health care professionals from several areas. In the MRFIT program for example, the health care team includes a physician, a nurse who specializes in hypertension, a specialist in smoking cessation, a clinical psychologist and a clinical nutritionist.

Although working in different areas, much of the team's effort centers on successful behavorial modification. For behavorial modification to be effective, the clinical nutritionist must not only know how to talk with people, but must appear non-judgmental and non-threatening to patients, being confident and knowledgeable — without being overpowering.

Student JoAnn Heppes is doing her practical experience at a Rush affiliate, Mile Square Health Center, where she works with obese women. "Behavorial modification is our main objective," she says. "We offer suggestions to the women on how



In the Multiple Risk Factor Intervention Trial (MRFIT) study, participants periodically show chief nutritionist Terry Dolecek, M.S., R.D., (right) the types and quantities of food they eat.

Understanding and establishing a give-and-take relationship is important when working with adolescent patients, says Gary Strokosch, M.D. (left), Director of the Section of Adolescent and Young Adult Medicine.

they can modify food habits developed over a lifetime to help them lose weight."

Ms. Heppes is part of a health care team which includes a clinical psychologist and social worker. The team meets three times a week to discuss the women's progress. Ms. Heppes explains that weight loss is monitored, and if there is an emotional or physical problem slowing the progress, it's discussed with the psychologist, or social worker.

Aside from eating habits, Ms. Heppes explains that the women are taught ways to help them lose weight. "We tell them to eat in one place at home and without any distractions (away from radio, television, etc.) so they can concentrate on enjoying the foods they are eating and think about what they are doing."

Working with a variety of patients and health care professionals is the most rewarding part of the clinical nutrition student's training.

"Let's face it, the key to effectively trained clinical nutritionists is the combination of the basic scientific understanding of the area combined with the practical experience," says Dr. Strokosch, "because students need to be involved with patient care, preferably on a long-term basis where they have an opportunity to observe and consult not only with the patient, but with the other attending medical staff."

Meeting as a team gives health care professionals a chance to get what Dr. Strokosch calls "mutual education," based on professional respect. "I know I'm a lot smarter because of it," he says.

Dr. Schoenberger adds another reason for including clinical nutritionists as members of the health care team.

"The key is still in changing someone's lifestyle," he says. "If you can do that, you're lowering a person's chance of having a heart attack.

"And the cost of receiving nutritional counseling is far less than being treated for a coronary."

200 Learn About Rush Model for Nursing

"Colleagues in Patient Care: The Rush Model for Nursing" was the subject of a two-day conference held April 20-21. More than 200 people attended the conference, which was planned by the College of Nursing in response to numerous requests from health professionals throughout the country to learn more about the Rush system of nursing.

"Rush has tried to devise a structure of nursing that emphasizes accountability," said Luther Christman, Ph.D., R.N., Vice President, Nursing Affairs, and Dean, College of Nursing. "At the conference we explained how the system started, how it grew, and how it currently functions."

Speakers from the medical, nursing, and administrative staffs of the Medical Center and several visiting speakers discussed how primary nursing, quality assurance, and the practitioner-teacher program contribute to the success of the Rush nursing model. Speakers from the Medical Center included Dr. Christman, James A. Campbell, M.D., President of the Medical Center, Milton Weinberg, Jr., M.D., President of the Medical Staff, and Sue T. Hegyvary, Ph.D., R.N., Assistant Vice President for Nursing and Associate Dean, College of Nursing.

Visiting speakers were Gail Warden, Executive Vice President, American Hospital Association, who spoke on the topic "The Broad Perspective: Directions for Health Care," and Margretta Styles, Ph. D., R.N., Dean, School of Nursing, University of California at San Francisco, whose address was entitled "The Rush System as a Viable Option for the Future."

Test Pacemakers 18 Months Says RPSLMC Researcher

As part of an intensive national study of pacemaker implants Robert Hauser, M.D., assistant professor of medicine and assistant director of cardiology at the Medical Center collected follow-up data on 1,876 implants performed at Chicago area teaching hospitals to determine whether electronic circuitry changes made by manufacturers of pacemakers could result in product defects. Says Dr. Hauser, "Since more than 40,000 implantable pacemakers incorporating hybrid circuit electronics have been recalled for manufacturing defects during the past three years, serious questions have been raised regarding the safety and reliability of these advanced technology pulse generators."

Dr. Hauser found that the new hybrid circuitry models had a higher incidence of malfunction during their first year on the market than did the older discrete models, although by the second year of production, manufacturing "bugs" had been worked out and the new units out-performed the older models in a 30-month period. But, "Since serious inherent defects in hybrid models may not be recognized during the first year, new technology pacemakers should receive 18 months of clinical trial prior to routine implantation," says Dr. Hauser who recommends the 18-month permarket testing as a regulatory requirement.

Master's Program in Rehabilitation Nursing

A master's degree program in rehabilitation nursing will be established at Rush University with a three-year $234,494 grant from the Division of Nursing, United States Department of Health, Education and Welfare. The program is the first of its kind in the Midwest and the fifth in the nation.

Students will be accepted for the academic year beginning September, 1978, at the College of Nursing, Rush University, according to project director JoAnn Jamann, M.S.N., Ph.D., associate

Robert G. Hauser, M.D., demonstrates a rechargeable pacemaker on a patient. Dr. Hauser thinks pacemakers with new electrical circuitry should be tested before implantation.

professor of nursing, who stated, "The objective of this program is to prepare nurse leaders in the clinical specialty of rehabilitation to assume patient care, education, and research responsibilities."

JoAnn Jamann, Ed.D., R.N.

The primary training facility is Rush-Presbyterian-St. Luke's Medical Center, including its care network of 10 affiliated institutions. Two of these, Schwab Rehabilitation Hospital and Johnston R. Bowman Health Center for the Elderly, will provide much of the clinical experiences to the students.

The Physician as Writer

Invitingly described as afternoons for challenging reflection and participation, a new postgraduate course at Rush University focuses on physicians who also distinguished themselves as major literary figures.

The course, "Physician as Writer," recently announced by Harold A. Paul, M.D., Associate Dean for Continuing Education, is intended to offer a fresh perspective on the entire medical scene through a look at great literature, and to provide a welcome break in the routine of strenuous medical conferences.

Maynard Cohen, M.D., and Doris Vidaver, M.A.

"Physician as Writer" will vigorously explore selected fiction, chronicles, and autobiography by distinguished twentieth-century physician-writers. Emphasis will be on the writers' unique response to questions of medical ethics, social issues, and doctor-patient relationships, as well as on the physician as philosopher and humorist.

Specifically, this spring, the course is considering the written works of Oliver Gogarty, Irish otolaryngologist (1878-1957); William Carlos Williams, American general practitioner (1883-1963); Richard Selzer, American general surgeon (1927-); Mikail Bulgakov, Russian rural physician and surgeon (1891-1940); Anton Chekov, Russian general practitioner (1860-1904); and Carlo Levi, Italian general practitioner (1902-1975).

Course directors are Doris Vidaver, M.A., poet, critic, and university lecturer in English and American Literature, and Maynard M. Cohen, M.D., Ph.D., Chairman of the Department of Neurological Sciences, and writer on non-medical subjects. Dr. Cohen and Ms. Vidaver are both members of the Society for Human Values in Medicine. Although their concern has been mostly with medicine, they are now adding the further dimension of literature in medicine because of the country's growing interest in medical education. This year, and probably also next year, they will be concentrating on various combinations of courses: The Physician as Writer; the Physician as Character; and the subject of illness as a dominant literary theme. Future plans are to expand the course to include other subjects such as philosophy and ethics related to medical history, all as encountered in the literature.

Says Ms. Vidaver, "This is an experiment testing interest and range of possibilities for integrating humanities courses into the medical curriculum. It is the first time a course such as this has ever been given; we have just begun to tap the resources of the Medical Center in terms of faculty interest. There are many people here who have dual talents in the humanities and in medicine. We hope to be able to draw on this resource, as well as to present major guest lecturers sometime late in the spring. We expect to have one major humanities lecturer per year."

The Continuation Course, "The Physician as Writer," scheduled its spring session for the first four Wednesdays in May, from 1:30 to 4:50 p.m. Dates for future sessions will be announced. Enrollment in the course will be limited to 35 persons, and it will be given in the Academic Facility of Rush-Presbyterian-St. Luke's Medical Center, 600 South Paulina Street. Tuition and registration fees (including parking and coffee break amenities) are $65 for general admission, and $55 for the Rush physician.

As an organization accredited for continuing education, Rush University certifies that this course meets the criteria for (1) two university continuing education units or (2) 16 hours of Category I credit applicable to the American Medical Association's Physician Recognition Award. The course is classified by the Office of Continuing Education under the division, "Humanities in Medicine."

Instructions regarding parking, room location, books recommended, and other material will be mailed upon receipt of registration. Address the Office of Continuing Education, at 600 South Paulina Street.

Establish Borwell Professorship in Neurological Sciences

In late January, Medical Center trustees announced the establishment of the Robert C. Borwell Professorship in the Department of Neurological Sciences, the twenty-fourth named chair at the Medical Center.

Robert C. Borwell, Sr.

Mr. Borwell, retired senior vice president of Marsh & McLennan, Inc., is a Life Trustee of the Medical Center. The occupant of the $1 million chair established in his name will be the Director of the Center for Multiple Sclerosis and Related Diseases. The Center, now in development, will bring together specialists and resources from a number of areas, for a multidisciplinary approach to research and the treatment of multiple sclerosis.

In a letter to president James A. Campbell, Mr. Borwell defined the direction of, and expectations from, his philanthropy: "My interests in the activities at Rush-Presbyterian-St. Luke's have been broad and long standing. They have ranged from religion and its relationship to medical care and human understanding to special elements of rehabilitation of persons suffering from a variety of disabilities. No concern, however, has had a deeper impact on my relationship to Rush-Presbyterian-St. Luke's than my profound personal and long-time concern for patients afflicted with multiple sclerosis..."

Three-Year Study of Anti-Cancer Drugs

A three-year $160,000 grant to study the effects of several types of anti-cancer drugs on blood-forming organs has been awarded to Solomon Adler, M.D., Assistant Professor of Medicine at the Medical Center.

The award, from the National Cancer Institute, will enable Dr. Adler to study the effects of chemotherapy on the stroma, or "soil" in which blood is formed. Using mice as animal models, Dr. Adler plans to evaluate four or five common anti-cancer drugs.

The study may provide information which would help in planning combinations of chemotherapy. "We also may learn which drugs to avoid using together because of their toxic effects on the tissues which support blood formation, and thus avert some of the possibly serious side effects of chemotherapy," said Dr. Adler, who also is Chief, Special Hematology Laboratories for the Medical Center.

"We know that when patients are treated with chemotherapy, precursor cells for blood, called hemopoietic stem cells, are killed," Dr. Adler said. "Now we want to learn what the effects of this therapy will be on the stroma, the tissue which supports blood formation. We are treating mice with cancer chemotherapy drugs and then evaluating the capacity of their femurs and spleens to support blood formation under these conditions. It is possible that some agents may damage the tissue, but the effects may be delayed. Very little work has been done in this area," he said.

"Toxicity to the blood-supporting organs might show up late," he explained. "Previous studies have not explored the possible long-term effects since they have been carried out only until about six weeks after treatment. We will be looking at the mice up to nine months after treatment."

Dr. Adler and his associates plan to evaluate four different models to measure the ability of stromal tissue to support blood formation after therapy, and to evaluate the type, extent, and duration of damage inflicted on murine marrow and spleen stromal tissue by chemotherapy agents.

"We will explore the sensitivity of each of the four models and find out which type or types would be best suited to screen additional agents," Dr. Adler said.

Three Trustees Named to Board

Three new members were elected to the Board of Trustees of the Medical Center in February. Elected voting trustees for three-year terms (Class of 1980) were: Donald B. Davidson, Patrick Henry, and Joseph Regenstein, Jr.

Mr. Davidson is senior vice president and director, Marsh & McLennan, Inc. He is a director of the Chicago Youth Center and a member of the Board of United Charities of Chicago. He was graduated from Princeton and received his M.B.A. from The University of Chicago.

Mr. Henry is a director of the Darling-Delaware Company, the St. Louis and Oklahoma National Stockyard companies, and the Mid-City National Bank of Chicago. He heads the recently established Henry Foundation. Mr. Henry was graduated from Roosevelt University and was awarded the M.B.A. by Loyola University.

Mr. Regenstein is chairman and president of the Arvey Corporation. He attended Brown and Northwestern Universities and serves on The University of Chicago Board. He is vice president and director of the Joseph and Helen Regenstein Foundation, named for his parents. The most recent major project of the Foundation is the establishment of the Joseph and Helen Regenstein Eye Center now under construction on the ninth floor of the Professional Building.

Donald B. Davidson

Patrick Henry

Joseph Regenstein, Jr.

Medical Center Joins With CBS and National Poison Center to Prevent Poisonings

Poison.

It's not an unfamiliar substance to humankind.

Socrates, among other famous persons, died of it. Shakespeare found ingenious uses for it in nearly all of his plays.

Unfortunately, poison is not confined to pages of history nor the stage of the bard. All of us keep it in our homes—under the kitchen sink, in the bathroom medicine chest, sometimes even on the bedside table.

Today, it is estimated that more than 2 million Americans become ill from poisons every year, and approximately 3,000 of them die. Ninety percent of those affected are children. It is the major means of suicide in the United States.

Rush-Presbyterian-St. Luke's Medical Center has begun a program to help reduce those statistics. In April, the Medical Center joined in a cooperative venture with CBS TV in Chicago (WBBM-Channel 2) to alert the public to poisoning dangers and how to prevent them.

The program, which will reach at least six counties in northeastern Illinois, is called—"MR. YUK." It is aimed primarily at children. The infamous MR. YUK is an ugly opposite of the familiar "happy face." It is hoped that his bilious green visage will soon adorn bottles, cans, and packages which contain anything of a potentially poisonous nature. These graphic warning labels are obtainable by sending a self-addressed, stamped, business-sized envelope to "MR. YUK, Rush-Presbyterian-St. Luke's Medical Center, 1753 W. Congress Parkway, Chicago, Illinois 60612."

WBBM-TV had already featured MR. YUK and the RPSLMC Poison Control Center in newspaper advertisements and on their television news broadcasts. The response from the public has been positive. Within the first week of the program, the Medical Center received thousands of requests for the MR. YUK stickers, including many from schools, pediatricians, health centers and industries. Telephone calls for Poison information have doubled.

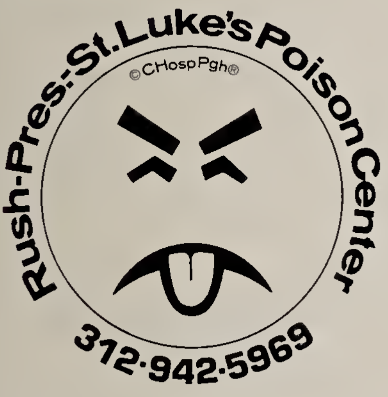
The volunteers of the Medical Center are devoting their time to the program by tabulating requests, sending out the MR. YUK stickers, and standing by to be of assistance wherever needed.

Pittsburgh Children's Hospital was first to begin this innovative poison control program. That was seven years ago. Their poison center reports that, before the program's inception, there were several fatalities a year from poison—most of them children. Since the inception of the program the number of deaths has dropped to zero. Calls for poison information have grown from 2,500 a year to 70,000.

Now nationwide, the MR. YUK program at the Medical Center is the first in Illinois. The RPSLMC Poison Control Center itself, however, is not new. Over 20 years ago, Louis Gdalman, then chief pharmacist at the Medical Center, began the unit. It was shortly thereafter designated the Master Poison Control Center for Chicago.

Donald Ebersman, Ph.D., director of the present center, notes that the MR. YUK program is a continuation and expansion of the center's tradition of service to the area's individuals and other institutions.

"By taking part in this program," Dr. Ebersman said, "the Medical Center joins in a national coordinated poison control program. It gives us access to poison information and backup Telecopier support from the National Center in Pittsburgh."



As part of RPSLMC's future plans, the MR. YUK project will include a training program for preschoolers. This phase will teach children of poison dangers and will alert them to identify MR. YUK as the warning symbol. Through this part of the poison control program, the Medical Center hopes to reduce further the incidence of poisoning by helping to make homes and all the places where children gather more poison-proof.

Rush University Receives NCA Accreditation

Rush University has received ten-year accreditation from the North Central Association of Colleges and Schools (NCA). Ten years is the maximum term of accreditation granted by NCA.

Action to renew Rush's accreditation was taken by the Executive Board of the NCA's Commission on Institutions of Higher Education based on recommendations of an NCA review committee. Rush University is one of more than 800 post-secondary institutions and 4,300 schools to be accredited in the 19-state North Central region.

Rush University 1978 Programs in Continuing Education

Rush University created the Office of Continuing Education in October 1977 to expand education programs for practicing physicians, nurses and other health professionals. Under the direction of H. A. Paul, M.D., Associate Dean, Office of Continuing Education, the department has offered 13 courses attended by over 1500 people.

The number of courses and variety of subjects offered is rapidly increasing. In October the courses offered were primarily for physicians; today, there is a broader range of course subjects which are attracting physicians and allied professionals from many diverse fields.

The following courses are scheduled for the summer and fall, and additional offerings are currently being planned.

For registration information contact the Rush University Office of Continuing Education, (312) 942-7095.

Course Title & Date

June 28, July 5, 12, 19, & 26
Family Practice Review Course
31 hours, AMA Category I credit
31 prescribed hours, American Academy of Family Physicians

September 8, 10, 1978
Micro-Surgery Workshop
16 hours, AMA Category I credit
In conjunction with the September 9 Workshop

September 9, 1978
Treatment of the Injured Hand
7 hours, AMA Category I credit

September 15, 16, 1978
Decision in Cardiovascular Practice II: Interpretation and Emergency Management of Arrhythmias
12 hours, AMA Category I credit

September 14, 15, 16, 1978
In-Depth Workshop on Bone Tumors
18 hours, AMA Category I credit

September 21, 22, 1978
Issues in Diagnosis in Child Psychiatry
7 hours, AMA Category I credit

October, 1978
Neurology for Non-Neurologists
Credit hours to be announced

November 2, 3, 1978
New Approaches in Clinical Electromyography
12 hours, AMA Category I credit

November 3, 1978
Decision in Cardiovascular Practice III: The Scope & Limitations of Instrumentations
7 hours, AMA Category I credit

NURSING ALUMNI HOLD ANNUAL MEETING

The Annual Tea and Banquet highlighted this year's April 20 Homecoming Day for the Rush-Presbyterian-St. Luke's Nurses Alumni Association. Tours of the Medical Center preceded the tea, which was held in Room 600 and which featured the unveiling of a portrait of Luther Christman, R.N., Ph.D., first Dean of the College of Nursing and Vice President of Nursing Affairs at the Medical Center. More than 300 alumni took part in the Homecoming activities.

At the unveiling ceremony, Joyce M. Stoops, R.N., M.S., President of the Nurses Alumni Association, outlined Dr. Christman's career and many accomplishments, which include being named the outstanding Man Nurse in 1975 by the National Association of Male Nurses and also the establishment by that organization of the Annual Luther Christman Award (first presented to President Gerald Ford).

Ms. Stoops also outlined the Rush Model of Nursing, which involves the implementation of primary nursing, quality assurance, and teacher-practitioners.

James A. Campbell, M.D., President of the Medical Center, said that it was "an honor to publicly pay tribute to Luther Christman, who probably is the original Rush type: dedicated, innovative, persistent, and triumphant... he has lived his creed and put into action his beliefs—he means what he says and does what he intends."

The portrait, which was painted by noted artist Walter Parke, will hang in the Rush University library.

The Homecoming Day's activities culminated in a reception and banquet in the Radisson-Chicago Hotel. At the banquet, Joyce Stoops presented the Achievement Award of the Alumni Association to Ruth Johnsen, R.N., A.M., for meritorious service. Dr. Christman reported on the accomplishments of the College of Nursing and of the Division of Nursing at Presbyterian-St. Luke's Hospital. Dr. Campbell's address included a presentation of the Medical Center's plans for the future, a tribute to the Alumni Association for its past support, and a call to partnership in helping the Medical Center develop the facilities and programs it must have to serve "its nurses, physicians, and, above all, its patients."

Joyce Stoops, R.N., President of the Nurses Alumni Association, Luther Christman, R.N., Ph.D., and the portrait presented in his honor.

ALUMNI COMMENCEMENT PLANS SET

The Alumni Association of Rush Medical College will hold its annual Commencement Banquet on Friday, June 9, 1978, at the Drake Hotel in Chicago. A cocktail reception for the Rush Class of 1978, Rush alumni, and the staff of Rush-Presbyterian-St. Luke's Medical Center will precede dinner and will begin at 6:30 p.m. This year, for the first time, dancing will follow the banquet.

In addition to honoring the Class of '78, this year's banquet will feature special recognition for Rush's 50-year alumni class, represented by Minnie O. Perlstein, M.D. Dr. Perlstein is still in active practice in dermatology in San Jose, California.

The Alumni Association will also honor this year's Distinguished Alumnus, Clarence W. Monroe, M.D. Dr. Monroe is an Emeritus Professor of Plastic and Reconstructive Surgery at Rush University and now lives in Waverly, Ohio. Dr. Monroe's distinguished career includes many years of service in the developing nations where he introduced both his skills and various previously unavailable instruments for plastic and reconstructive surgery.

Besides the Class of '28, the Rush Classes of '33, '38 and '73 will be invited to celebrate their respective anniversaries. The Class of '33 will be represented by Dr. Monroe. The Class of '38 will be represented by William J. Ferguson, M.D., an ophthalmologist from San Francisco, whose son, Tom, will be graduating this year. The first "new" Rush class to celebrate a 5-year anniversary, the Class of '73, will be represented by Floyd Shewmake, M.D., a fellow in internal medicine at Rush-Presbyterian-St. Luke's Medical Center.

The same day the annual meeting of the Alumni Association will be held at a 12 noon luncheon in Room 600 at the Medical Center. The meeting will provide an opportunity for Rush alumni to see Rush's plans for the future. Following the meeting, a lecture-tour about Rush, past and present, will be available to alumni.

Saturday, June 10, will mark the Commencement of Rush University. The principal speaker will be Julius B. Richmond, M.D., the Assistant U.S. Secretary for Health, and a former member of the national advisory committee that assisted in the reactivation of Rush Medical College. All alumni are invited to Commencement, and 50-year alumni will be invited to join in the academic procession.

ALUMNI NEWS BRIEFS

Mark Twain certainly was right that some reports of people being deceased are greatly exaggerated. Three such incorrect obituary reports were carried in the last issue of *The Magazine. Hugo C. Baum,* M.D. (RMC '36), *Julian M. Bruner, M.D. (RMC '27), and Marvin B. Padnick,* M.D. (RMC '73) are all very much alive and well. Dr. Baum is a senior attending physician at Rush-Presbyterian-St. Luke's in obstetrics and gynecology and has an active practice in Chicago. Dr. Bruner is a retired plastic surgeon, now living in Des Moines, Iowa. Dr. Padnick will be completing a fellowship in cardiology at the Cornell Cooperating Hospitals, North Shore Community Hospitals, in Manhasset, New York, and as of July will begin practicing cardiology in Phoenix, Arizona.

Edwin H. Lennette, Ph.D., M.D. (RMC '36) has been elected President of the American Society for Microbiology. He is the Immediate Past-President of the Tissue Culture Association and has also served as President of the American Association of Immunologists, the American Biology Council and the Federation of American Societies for Experimental Biology.

George A. Nicola, M.D. (RMC '37) was selected this year for the Man of the Year Award, presented by the Lebanon-Syrian-American Society at its annual dinner in Los Angeles. Dr. Nicola was cited for his civic and professional contribution to his community. In addition to his wife, Josephine, and his two daughters, also attending were his two sons who are also Rush trained, Fred (RMC '77) and George, Jr., a Phase III student at Rush Medical College.

David C. Dahlin, M.D. (RMC '40) was named to a team of the nation's leading medical laboratory experts who conducted more than 150 educational workshops and seminars during the joint spring meeting of the American Society of Clinical Pathologists and the College of American Pathologists, March 16-23, at the Convention Center in Dallas, Texas. Dr. Dahlin is associated with St. Mary's Hospital of the Mayo Clinic in Rochester, Minnesota.

Harold A. Bjork, M.D. (RMC '41) was cited for distinguished medical achievements by being named a Fellow of the American College of Radiology. The College awarded Dr. Bjork a certificate of Fellowship during its annual meeting and Convocation in San Diego, April 11. Dr. Bjork is affiliated with St. Catherine's and Kenosha Memorial Hospitals, Kenosha, Wisconsin, and Memorial Hospital, Burlington, Wisconsin.

ALUMNI HOLD ANAHEIM CARDIOLOGY RECEPTION

Forty-five former and present staff members of Rush-Presbyterian-St. Luke's, together with cardiologists who graduated from Rush Medical College, attended the March 6, 1978, alumni cocktail reception at the Disneyland Hotel in Anaheim, California. The reception was held in conjunction with the 27th Annual Scientific Session of the American College of Cardiology.

Host for the meeting was Leo M. Henikoff, M.D., Acting Dean of Rush Medical College and a pediatric cardiologist. Also attending was Joseph V. Messer, M.D., Director of the Section of Cardiology at Rush-Presbyterian-St. Luke's.

THE POOLED INCOME FUND: A FLEXIBLE ALTERNATIVE

When many people think of planned giving, or "deferred giving" as it is sometimes called, they often think that this is restricted to large gifts of $100,000 or more. Many people feel that, even though they would like to benefit Rush with their estate planning gifts are too large for them to consider. Here the Pooled Income Fund provides an important alternative. The Pooled Income Fund is attractive in that it combines smaller and larger gifts in an investment pool which provides the income benefits, long-term investment growth, and ultimate benefit to the Medical Center of large charitable gifts in trust. Therefore, any gift of $5,000 or more can have all the advantages of planned giving.

In a Pooled Income Fund, donors receive life income for themselves and their beneficiaries based on the income earned by such a fund and proportionate to their shares in it. The number of shares the donor has in the fund is based on the size of his or her gift in proportion to those of other donors. The fact that a number of smaller gifts can be joined together in a Pooled Income Fund provides an investment flexibility which is an advantage to both the participants in the fund and the Medical Center. The trustee of the fund, in this case the Northern Trust Company of Chicago, has an opportunity to manage and invest one large fund instead of several smaller ones.

The donors and beneficiaries of such a fund retain life benefits for themselves. Upon the death of the last beneficiary of each separate agreement, the current market value of the donor's assets is determined and that amount is removed from the fund and becomes the property of the Medical Center. Since the donor's original transfer of assets to the Pooled Income Fund is a gift to the Medical Center, the Pooled Income Fund is not construed as a commercial investment fund and the income, capital gains, and estate tax advantages of other planned gifts apply.

If appreciated property is used as a donor's gift to a Pooled Income Fund, *no* capital gains liability is incurred. The donor also receives an immediate income tax deduction, actuarially determined, to which the five-year carryover applies. As with other planned gifts, this allows the donor to invest in an arrangement that will produce income without the usual capital gains tax burdens and also realize the benefits of an income tax deduction. The gift also significantly reduces the taxable estate. The individual income from the fund is taxed as ordinary income.

There are advantages for both smaller and larger gifts in a Pooled Income Fund. Take the example of a donor who wishes to contribute $10,000 to a patient care facility at the Medical Center with a gift of stock that originally cost her $5,000. At age 65, she also wishes to provide for part of her retirement income through the Pooled Income Fund. Assuming that the fund's average rate of return over the past three years is 6% (this same percentage is also used for computations if the fund is less than three years old), this donor would receive an immediate income tax deduction of $4,419.70. This deduction and the avoidance of all capital gains tax on the highly appreciated stock would significantly decrease the cost of her gift and increase the actual rate of return on her investment. In the following years, her income would be determined by the total performance of the fund and her shares in the fund. Assuming that the fund performs as well as or better than the growth of the economy, the donor's income would also keep pace with the economy (and the advantage of professional management of the donor's gift makes this more likely).

The larger gift also benefits greatly from a Pooled Income Fund. Major factors here are long-term investment growth protential, a good level of income, and the avoidance of all capital gains tax on the original gift. To take an actual example, a donor transferred stock worth over $400,000 to the Medical Center in the Pooled Income Fund. This size of gift gives substantial investment potential to the entire fund and benefits other donors to the fund. This particular donor also benefited in that the stock he transferred had more than tripled in value. Since this donor had *no* capital gains liability for the appreciated stock, and had a substantial income tax deduction in addition, he was able to make this large gift which benefited both him and the Medical Center.

If you wish to investigate the advantages of a gift to Rush through a Pooled Income Fund, please fill out the form below and return it to:

Office of Estate Planning
Philanthropy and Communication
Rush-Presbyterian-St. Luke's Medical Center
1753 West Congress Parkway Chicago, Illinois 60612

You will receive a prompt and confidential reply.

TO: Office of Estate Planning
Rush-Presbyterian-St. Luke's Medical Center

Please send me further information about Rush-Presbyterian-St. Luke's Medical Center's Pooled Income Fund. The following is confidential information pertinent to the Pooled Income Fund:

1st Beneficiary/Donor________________

Date of Birth__________ Male______ Female______

2nd Beneficiary (if desired)________________

Date of Birth__________ Male______ Female______

Name________________

Address________________

Telephone: Office__________ Home__________

The Magazine, Incorporating the Bulletin of the Alumni Association of Rush Medical College, is a publication of the Office of Philanthropy and Communication, Rush-Presbyterian-St. Luke's Medical Center.

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The Magazine
Rush-Presbyterian-St. Luke's Medical Center
1753 West Congress Parkway
Chicago, Illinois 60612

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